

THE FUTURE OF MEDICINE

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New York City

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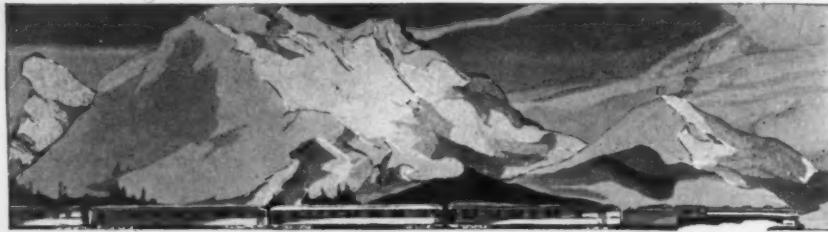
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The Future of Medicine

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Asthma

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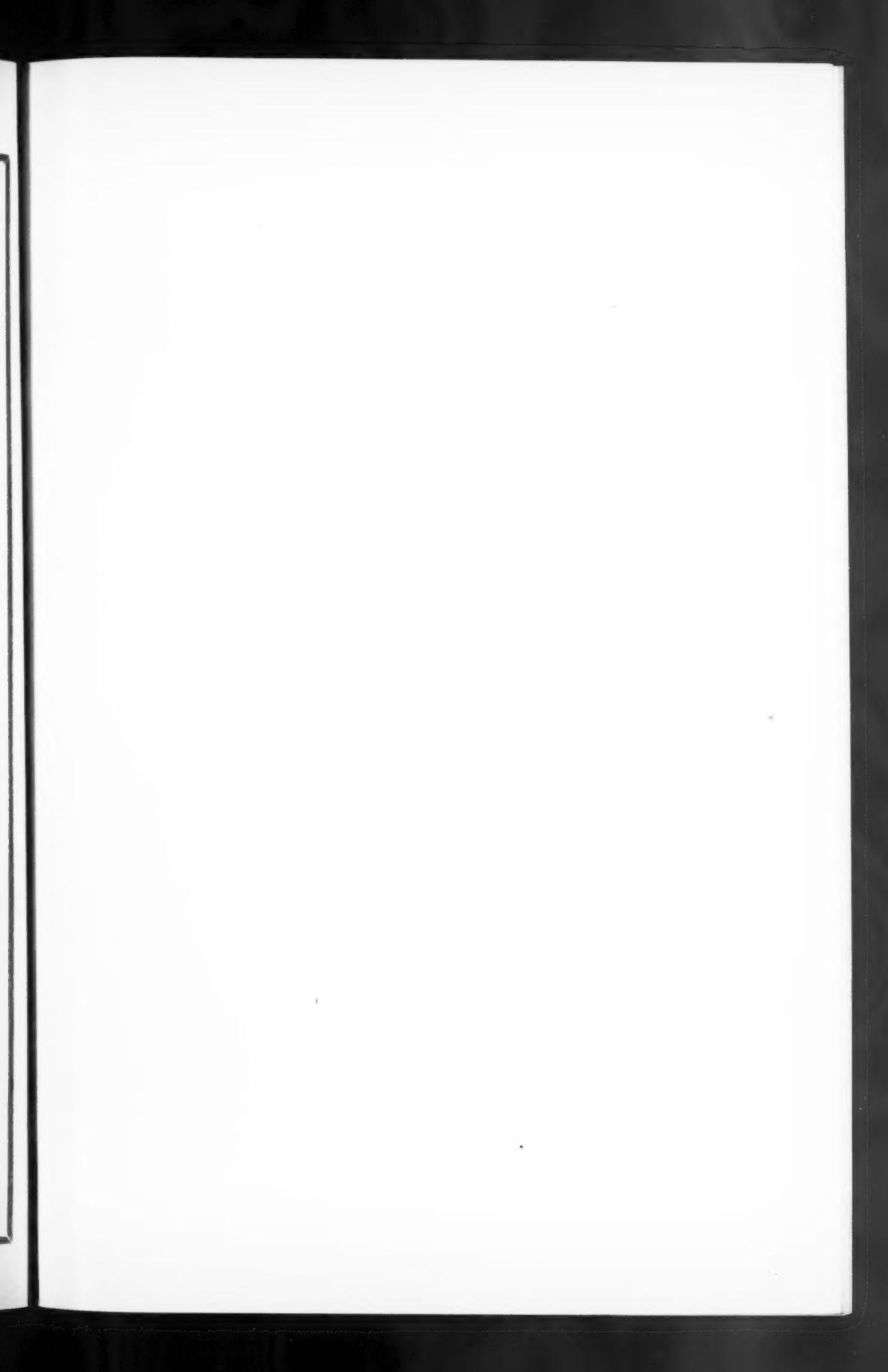
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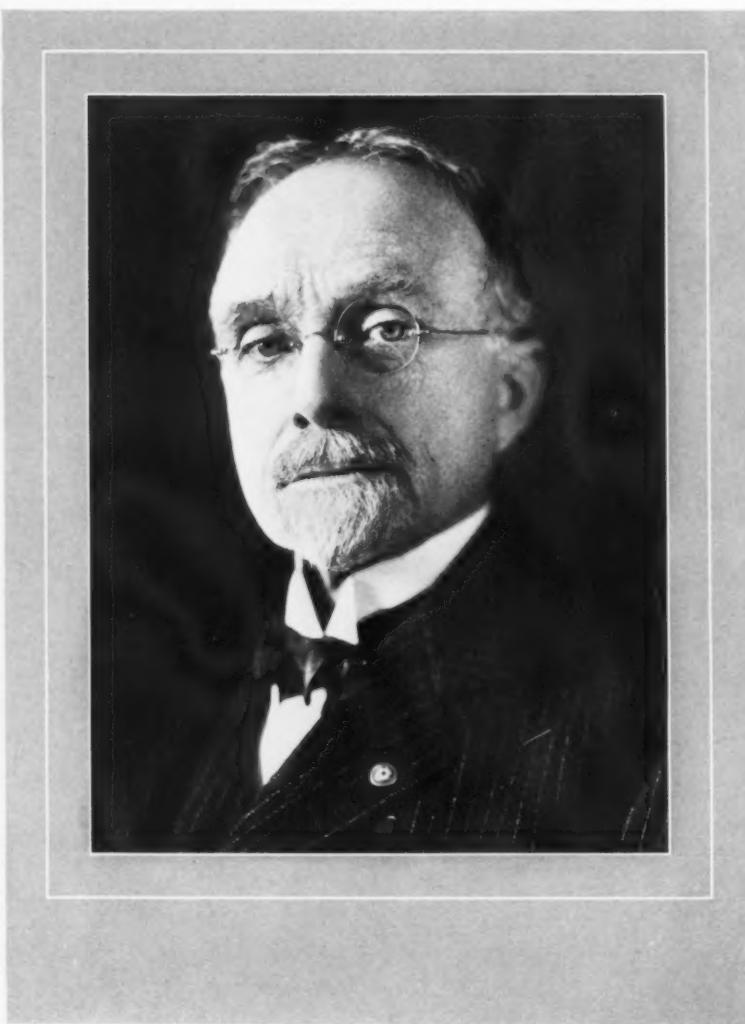
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**CHEVALIER JACKSON, M.D., Sc.D.,
LL.D., F.A.C.S.**

CLINICAL MEDICINE AND SURGERY

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Dr. Chevalier Jackson

IT IS rare that an important specialty is developed practically by the genius and labors of one man, and rarer still that such a man lives to see his work grow to imposing proportions. Such has been the almost unique experience of Dr. Chevalier Jackson, in regard to bronchoscopy and esophagoscopy.

This unusual man saw the light in Pittsburgh, on November 4, 1865. His parents, William Stanford and Katharine Ann (Morange) Jackson, must have been unusual people also, for he says of them that his mother's interest in medical science stimulated his efforts and that his father's reiterated advice to educate his eyes and fingers was a constant spur to him.

He attended the University of Pittsburgh and Jefferson Medical College, Philadelphia, receiving his Doctorate in Medicine from the latter institution in 1886, following which he visited and studied in various European clinics for a year. Upon his return he established himself as a laryngologist, in his native city, and not long afterward was made professor of laryngology in the University of Pittsburgh.

About this time or somewhat later (1894), Kirstein, of Berlin, proposed a method for direct laryngoscopy or "autoscopy," using a small lamp on a head-band

for deep illumination. Three years after this (1897), Killian passed a metal tube into the tracheobronchial tree, using Kirstein's lamp as his source of light.

Dr. Jackson became profoundly interested in these new methods and set out to improve upon the instruments and technic. His patience and manual dexterity made him remarkably successful, and the instrumentarium and maneuvers of modern bronchoscopy and esophagoscopy depend almost wholly upon his work, for it was he who introduced and perfected the distally-lighted bronchoscope and the delicate and diverse forceps which are used with it in clinical practice.

In 1916 he took the chair of laryngology at Jefferson Medical College. He now enjoys the highly remarkable distinction of being professor of bronchoscopy and esophagoscopy in two institutions at the same time—Jefferson Medical College and the University of Pennsylvania—as well as lecturer on these subjects at the Women's Medical College of Pennsylvania and at Temple University, Philadelphia. He was the first president of the American Bronchoscopic Society, which was organized in 1917.

Dr. Jackson is a member of all the important societies in his line, as well as of

the American Philosophical Society and the Art Club of Philadelphia (he paints the colored illustrations for his books). Foreign governments have made him a Chevalier of the Legion of Honor and of the Order of Leopold. There seem to be few more distinctions for him to seek; and yet, he is so modest and retiring that it is difficult to discover the details of his epoch-making researches and inventions.

His contributions to the literature of the specialty which he largely built are numerous and highly important, including his "Peroral Endoscopy and Laryngeal Surgery," "Manual of Bronchoscopy and Esophagoscopy" and the recent "The Nose, Throat and Ear and Their Diseases," which he edited, with George M. Coates and Chevalier L. Jackson, as well as many articles in systems of medicine and current periodicals.

Having no desire for personal glory, he has established a clinic at which many men have been and are being trained in his methods and technic, in order that these may not be lost to posterity.

Dr. Jackson is an eminent example of the power of industry and intelligence and of the modesty of genius.

•••••
Self-development, in the true sense of the word, means the elimination of selfishness.—Harlow D. Grose.
•••••

THE FUTURE OF MEDICINE

SOMEBODY said, not long ago, that the period of discovery, in Medicine, is past—that no more matters of importance remain for us to find out. One wonders how he got that way. Such a statement is little, if any, more sensible now than it would have been a hundred years ago; and the progress during the past century has been without parallel in the world's history.

We cannot, however, base prophecies, or even surmises, upon matters now wholly unknown. It is important, none the less, that we leave room, in our estimates of the future, for new things which may

appear at any time, with little or no warning and with revolutionary effects.

On the basis of information now at our disposal, Medicine seems to be standing at a fork of the roads, with three principal alternatives before it: The taking over of medical practice by the State (socialized medicine); the management of the nation's health service by the medical organizations (giving us, largely, clinic or group practice); and a definite return, so far as may be, to individual service by the family physician.

State Medicine has been and is being tried, in England and some other countries, and those who have studied its workings find the picture far from encouraging. We believe that it would be unmitigated disaster for most of the physicians in the United States. It will be upon us, however, being, even now, on the way, if we do not perceive the danger and take active and coordinated steps to avert it.

It is curious to observe the solidarity and busyness of socialists, syndicalists and others who are perniciously eager to uplift other people; while the millions of prospective upliftees are so absorbed in their own personal affairs and jealousies that they will make no effort to cooperate. The success of highly organized and fanatical minorities in foisting their programs upon the country is notorious. This whole subject calls for earnest study by every member of the medical profession (the literature upon it is now abundant and growing), followed by prompt, vigorous and concerted action.

The second alternative looks more cheering than the first, but does not appear, to us, to meet the requirements satisfactorily. The fact that the world has profited by the results of the mass production of automobiles, cigars and sauerkraut does not, of necessity, mean that similar methods, in education or in health service, will be equally successful. In fact, the training of a child and the treatment of a sick man are such highly individual

matters that it is hard to see how they can ever be completely standardized without destroying many of their most valuable features.

Cooperative study of complicated cases, by specialists of all sorts, has added much to our knowledge and to the welfare of certain patients, but a careful comparison of past and present results, fails to convince us that patients in general are better (or even as well) served by a group as they are or could be by a single physician who is thoroughly familiar with the individual and able to apply present knowledge with reasonable intelligence and skill.

We, therefore, feel that the soundest and most satisfactory road for Medicine to take—as regards the individual physician and the public at large—leads in the direction of the development of more and better general practitioners, who will be eager, when necessary, to work in close cooperation with the specialists, the public health agencies, the dentist, the pharmacists, and all who are laboring for the public good.

Such a line of endeavor will require a profound alteration in general sentiment and a complete overhauling of the medical curriculums, and these things cannot be brought about, even by large numbers of physicians, working individually. They can, however, be achieved by the tremendous, but hitherto scarcely realized and little used, power of Organized Medicine, which must be unfalteringly supported and directed by the profession at large.

Ways must be found to put the facts before the people, as forcibly and insistently as the cults, ax-grinders, communists and other such are now spreading their propaganda.

One of the most powerful means to that end which is now in our hands is the popularization of the periodic health audit and the flat-rate, yearly health service. If people can be brought to look

upon their doctors as purveyors of health, rather than of cures, the battle will be half won.

The future of Medicine rests in the hands of the members of the profession. They have the knowledge, the power and the intelligence to mold circumstances in the wisest way, provided that they use these resources collectively and with vigor.

But if physicians persist in maintaining the archaic attitudes of individualism, professional jealousy and selfishness, narrow absorption in their vocation and ponderous reticence, which may, perhaps, have found some justification a few generations ago, they will presently be rudely awakened to find that the era of concerted activity has rolled over them and left them a prey to certain groups of persons who know exactly what they want—and who do not want, at all, the things which will be for our best interests or for the ultimate good of humanity.

Several thoughtful men are here presenting their ideas on various aspects of this immense subject, and we urge upon our readers the careful and prayerful perusal of these contributions, followed by whole-hearted action upon the conclusions they engender.

—————
The man of today is farther away from his grandfather, as regards the way he lives, than his grandfather was from the cave man.—Millikan.
—————

SCIENCE, FREE WILL AND IMMORTALITY

UP TO very recently, a belief in the actual possibility that the mind could definitely influence physical processes (apart, of course, from the effects which thoughts and emotions are known to produce upon the glandular secretions of animals and men); that a supreme Intelligence is directing the processes of evolution which are now universally recognized; and that human individuality—variously called the ego, the Self, the soul, etc.—is not dependent upon the physical body for its existence and is probably immortal, was

generally looked upon as being highly chimerical and unscientific, in spite of the fact that a number of men of high standing in the world of science have repeatedly affirmed the truth of these propositions.

Now comes another, Prof. Arthur H. Compton, of the physics department, University of Chicago, Nobel prize winner of 1927, declaring, in an interview published in the *Chicago Tribune* of May 25, 1930, that the most modern discoveries in physics show that the finer activities of the atom and the electron are not the dead, mechanical things they have been considered to be, but that they show a possibility of variation, in response to influences not predictable on a mechanistic basis, and that the mind may be, and very probably is, the source of these influences. Thus this newly-discovered "unreliability" of the physical world does away with the strongest argument of the materialists (by showing that there is a definite place for the intervention of such non-physical things as thoughts in the scheme of physical activities), and gives that world, for the first time, a truly human meaning.

Again, the freedom of choice which is predicated upon the release of physics from the unbending necessity of absolutely uniform reactions under similar conditions, leads directly and logically to the conclusion that thoughts are not the result of molecular reactions in the brain, obeying immutable physical laws, but are functions of the mind itself, which may reasonably exist quite apart from the brain.

This line of reasoning corroborates the feeling that most people have had from time immemorial, that the earth and the universe, as we see them now, could not, by any possibility, be the results of blind chance, since their marvelously interlocking relationships indicate the operation of a directing Intelligence, working toward a definite end.

It is quite possible that the human mind or soul is the nearest present approach to the evolutionary objective, and if such is

the case, we would expect Nature to preserve, at all costs, these preeminent fruits of the operation of her various laws, both physical and superphysical.

The physical body of a man is an insignificant thing in the universe; but the human mind, consciousness, character, soul—call it what one will—may well be of immense cosmic significance. To destroy this powerful, highly organized and definitely individualized product of immense effort in many lines, at the death of the physical body, would be inconsistent with what we know of the conservation of energy.

Thus do the newest dicta of orthodox science lead back to the statements of the sages and seers of all ages, that the Universe is the directed product of a supreme Intelligence, of which the minds of men are cooperating parts.

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We have traveled far from the standpoint which identifies the real with the concrete . . . Time must be admitted to be real, although no one could attribute to it a concrete nature.—Arthur Stanley Eddington.

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ASTHMA

THE time is approaching when those unfortunates who suffer from seasonal hay-fever and asthma will be looking up transportation schedules to the northern resorts or, lacking the cash or the time for a flight to relatively pollenless regions, will resign themselves to several months of snuffling and wheezing.

These people do not die of the maladies mentioned (at least, not directly), but their joy and efficiency are so reduced, during the "season," and their numbers are so large, that many competent men, in various parts of the world, are earnestly seeking measures for their relief or, perchance, cure.

Among these seekers, none seem to be meeting with such a large measure of success as that attained by those who are acting upon the suggestions put forth by Adam, of Glasgow, and Haseltine, of Chicago, and the men who have collabo-

rated with them in developing the toxicosis-nasal-trigger theory of the etiology of bronchospasm and vasomotor rhinitis.

This work, and the therapeutic measures based upon it, have been so fully reported in the literature that they need not be enlarged upon at this time, especially since the whole subject was well summarized in the "Symposium on Asthma," which appeared in the *Medical Journal and Record* for November 6 and 20, 1929, and is now embodied in a booklet of 130 pages, containing all of the articles. Those who are interested in the subject cannot do better than to study this symposium.

It seems timely, at this season of the year, to present, as we did in *The Clinic* of the June issue, reports by Dr. Haseltine of some of the cases he and his collaborators have treated, by the method of which he is the chief exponent in this country, and also comments on the method by a disinterested worker like Dr. Rice, so that our readers may obtain some idea of the results to be expected.

Treat the man who is sick, and not a Greek name.—Jacobi.

MINOR LOCAL ANESTHETICS

WHEN a major or minor operation is done under local, regional or spinal anesthesia, the powerful drugs cocaine, procaine or Butyn are employed, the modern practice being to precede them with a dose of one of the barbituric acid derivatives, such as barbital or Neonal, in order to guard against unpleasant or dangerous toxic symptoms.

But there are many cases in which a mild and more or less transitory degree of local anesthesia would be highly comforting to a patient, though they do not justify the employment of the potent obtundants which are required in more extensive surgical procedures. These conditions include superficial ulcers of the skin and accessible mucous membranes, abrasions, painful skin

eruptions, burns, sore throat, earache and the changing of dressings on open wounds.

The physician who overlooks nothing which will contribute to the comfort of those who are under his care will have a host of grateful and satisfied patients, so doctors who aspire to attain such a position will do well to keep in mind the *minor local anesthetics*, *Anesthesin* (ethyl amino-benzoate or benzocaine) and *Butesin* (n-butyl ester of para-aminobenzoic acid).

Neither of these substances is at all freely soluble in water (*Anesthesin*, 1:2,500; *Butesin*, 1:7,000), but both are fairly readily soluble in alcohol, dilute acids and oils. Both are white, odorless, tasteless crystalline powders. Both are moderately anesthetic and practically nontoxic. *Butesin* is decidedly more powerful in reducing local pain than is *Anesthesin*.

Both of these chemicals can be used with highly gratifying effect as dusting powders, ointments, suppositories, or dissolved in liquid oils. For effect on the mouth and throat, they are best administered in the form of troches.

For painful wounds, ulcers or other skin lesions, either drug may be employed as a dusting powder or ointment. For earache or for softening matted dressings, prior to removal from a wound, a 2-percent solution of *Butesin* (or 3 percent of *Anesthesin*), in warm olive oil, works well. Ointments or suppositories give pleasing relief in painful lesions about the anus and rectum.

For burns, primarily, but also for other painful skin lesions, a chemical combination of *Butesin* with picric acid (*Butesin Picrate*) is especially valuable, as can readily be seen from its composition. This may be used as a dusting powder (with sodium stearate), ointment or oily solution and even as an eye ointment, for use in burns of the cornea and conjunctiva and before and after the removal of foreign bodies from the eye.

Anesthesin has been combined with *Calcidin* ("iodized lime") in a troche, which

is useful, from two standpoints (analgesia and therapeutic effect), in the treatment of sore throat of various types.

Either of these drugs may, with profit, be added to oily solutions used for spraying the nose and throat, if the membranes are irritated or the patient especially sensitive. They also make pleasing additions to oily solutions for use in the urethra or in pathologic sinuses (such as Metaphen in Oil). In fact, the man who has become familiar with these minor anesthetics will find new uses for them almost every day.

When we consider that a very large proportion of patients come to a physician for the relief of pain; that many of these pains are of superficial origin; and that the thing that keeps many people away from the doctor's office is the fear that they will be hurt, it is rather surprising that these chemicals, which have such notable and flexible pain-relieving properties, are not even more popular than they are at present.

It is a fine thing for the physician if his patients can say of him, to their friends, "He didn't hurt me a bit."

STONES OR SOD

*Sad faces, worn and vacant faces
Drawn brows, tired eyes and drooping lips
Surge through the city's busy places,
Like waves that lash the bows of ships.*

*What blight comes up from stony pavements?
Only the young look happy here.
All folk seem caught in speed's enslavements;
All bear the stamp of nameless fear.*

*Let me go back to softer highways—
Green lanes, with pastures at the end.
I want to loaf in shady byways,
Dream and have time to be a friend.*

GEORGE BURT LAKE

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All the leading articles in this issue are entered in the prize competition. See voting coupon on advertising page 52.

LEADING ARTICLES

The Future of Medicine

By S. ADOLPHUS KNOFF, M.D. (Univ. of New York and Paris),
New York City

WHAT Medicine may become in remote time, or even in the relatively immediate future, is hard for mortal mind to foresee. What it seems to us it should be, and what it can be, has long been, and is now more than ever felt not only in the hearts and minds, of the seers and prophets, but by all deep thinkers in our own ranks. Being neither a prophet nor the son of a prophet, nor of a seer, my own vision is limited, and I can only hope and believe that the future of Medicine, with its allied sciences, may be such as some day to conquer, not only the disease of the body and mind, but also poverty and crime, as love will conquer hate and man's inhumanity to man. This latter, alas, is still one of the main causes of unhappiness and a hindrance to true progress towards the physical and spiritual welfare of the world of men.

In the future, Medicine will be preventive, curative, and even more comprehensive than at the present time. In speaking of the future of Medicine I take the position that there is nothing in human affairs which has not its direct or indirect medical bearing, though at times, perhaps, it may be remote.

It is the physician of the future who will be the important factor in the progress of mankind because, by reason of the healing art to which he will be devoted with almost religious fervor, he will work for the betterment of the race in its physical, mental, moral, civil, economic and even spiritual aspects. I do not know how long it will take to attain this state, but I feel that the Medicine of the future must play the most important part in the redemption of mankind.

That this can be accomplished by the elimination of the personal element of the physician I do not believe. We will need the family physician in the future as much as we do today. The human touch, so essential in the treatment of the patient, can best be given by the one whom he feels to be also a friend. The majority of physicians are still, as in former times, general practitioners, and their relatively immediate lot must be considered, as well as their relation to the future of Medicine.

ABUSE OF CLINICS

We are now in the stage of huge endowments for medical centers comprising all possible branches and specialities of Medicine, from psychiatrics to dentistry. A large number of endowed private hospitals, besides State and municipal institutions, sanatoriums, asylums, hospitals, free general medical and surgical clinics, dispensaries, group practice, health demonstrations, public health stations, prenatal advice stations, public and private maternity, birth control clinics, free dental clinics, marriage advice stations, etc., are all working for the public good, curing and preventing disease, but decreasing the economic status of the general practitioner and also of the dentist.

If the clientele of these institutions were strictly limited to the absolutely poor, they should certainly be considered an unalloyed benefit to the Commonwealth, and I venture to say that no one would be more pleased to serve them gratuitously than the general practitioner. However, anyone at all familiar with the situation cannot deny that,

instead of being a benefit to the poor exclusively, a good many of these institutions, knowingly or unknowingly, serve the so-called middle classes; and even the upper classes are often treated, if not absolutely gratuitously, at least for so moderate a fee that no general practitioner could compete with them. His financial existence is threatened, if he wishes to adhere to the high moral code of ethics and the Hippocratic oath to which he swore on the day of his graduation. I am glad to pay a tribute here to the many general practitioners who suffer privation, if not actual want, rather than resort to anything not compatible with the dignity of their profession.

It would be unfair here not to pay a tribute also to the many men engaged in public health work who remain in their positions, although they are not better remunerated than they might be in private practice. On the contrary, Surgeon General Hugh S. Cumming, of the United States Public Health Service, recently gave figures to show that the salaries received in public health work indicate that "the compensation, compared with what we are led to believe the private practitioner gets, is not an inducement to young men to enter this work."

There is another group of physicians who deserve our sympathy, and to whom I wish also to pay a tribute. I refer to many who are employed by large private corporations and who, as stated in a recent editorial in the *N. Y. Medical Week*, Vol. IX, No. 22, "are working for salaries that are totally incompatible with the long and expensive training required to prepare them for their work." In comparison with the wage scales for uneducated workers, it is evident that a great injustice is being done to a noble profession. If there is no other way to get justice, physicians must unite in their efforts to overcome this degrading tendency of soulless corporations to commercialize medicine.

OVERSUPPLY OF PHYSICIANS

In regard to the economic status of the general practitioner the question which comes to one's mind is, "Are there too many physicians and too many dentists?" The latest directory of the American Medical Association gives the number of physicians in the United States in 1929, as 152,503; and the Librarian of the New York Dental College reports 67,117 dentists in the United States in 1928. Of

course, it is quite possible that some of the medical as well as dental graduates returned or went to other countries to practice, but these will certainly be a negligible quantity. However, realizing that the number of physicians and dentists is far too great for the population, the better medical and dental schools now in existence are limiting the number of students by requiring a higher standard for entrance and much longer courses of study, as compared with former years. In the medicine of the future, its leaders will see to it that there will be a stabilized population and a corresponding number of physicians, dentists, and specialists.

Unfortunately, merely reducing the number of regularly educated, licensed and ethical physicians will not be enough to make their economic position secure, because the 150,000 regular physicians constitute only one-tenth of the number of men and women assuming the responsibilities of caring for the Nation's health, there being one million other persons directly or indirectly engaged in the cure of illness.

On page 16 in Alton Peebles' "Survey of Statistical Data of Medical Facilities in the United States," published in November, 1929, it is stated that "there are about 1,500,000 persons whose services are utilized by the inhabitants of the country in connection with the cure of illness, including physicians, dentists, osteopaths, chiropractors, Christian Scientists, etc." Neither the enumerated nor the estimated list of such persons contains the non-medically trained psychoanalysts, nor the lay heads of purely commercial x-ray laboratories. These, as well as the self-styled healers, are responsible for irreparable harm often done to trusting patients. Among the thousands following cults and isms, there are many who claim, not only to have equal, but superior skill, to those engaged in and qualified to practice regular medicine.

There is only one way to protect the public against these practices. There will have to be a strict law, strictly enforced, that no one shall be allowed to undertake the diagnosis or treatment of the physical or mental ills of any individual, man, woman or child, for monetary compensation, who has not successfully passed the same examination that has been demanded of the graduate of a regular medical school. A license to practice must be required and obtained only in this way. Having com-

pleted such requirements, the licentiate can then practice whatever he wishes and call himself what he pleases. A Federal examining board would be the ideal for this purpose, and I have no doubt that the enforcement of such a law will prove of the greatest benefit to the physical and mental health of the nation.

A warning to the men and women who contemplate entering the medical profession may perhaps be appropriate at this time. The future of Medicine will primarily depend upon the type of men and women who enter the profession. The future physician should, of course, have a college education, but aside from that there must be certain personal qualifications. First of all, there should be perfect health, without acquired habits which, if continued, might ultimately impair this perfect health.

Neatness in appearance, gentle manners and speech would be required, and high moral and mental qualities; also qualities of heart which would make one a welcome visitor in the sick room and a welcome member of society. However, before selecting Medicine as a career, one must feel the call to it, as the future minister feels the call to religion, for in the service to medicine one will find a religion, no matter to what creed or denomination one may belong, or even if belonging to none.

Never should men or women enter Medicine with the thought that in this career there will be more than an opportunity to make an honest living and serve mankind, or that gaining fame is possible, except by reason of hard work, talent or unusual achievement.

There is a justification for deans and admission committees to consider what is known as the personal equation of candidates. The apparent likelihood of making the prospective medical student into a physician of high ethical culture and refinement, and a practitioner of at least average ability, should be as much and perhaps even a good deal more considered than unusually brilliant preliminary college scholarship, standing in society or wealth.

NEED FOR PRACTITIONERS

Opportunities for distinction in Medicine and its various branches will always exist, even for the average man or woman. There will always be specialists in the field of medicine of the future, because of constantly acquired knowledge in scientific laboratories of all kinds—in physiology,

psychology, pathology, bacteriology, radiology, in clinics, hospitals, sanatoriums and sanitariums, preventoriums, maternities, health centers, etc.

This does not mean, however, that the need of the well educated general practitioners will exist no longer. On the contrary, with the relatively fewer men entering medical schools and with the increase of specialization in medicine and surgery, such doctors will be more needed and, because of their all-around knowledge, there will be opportunity for these men to distinguish themselves as well as great or lesser great specialists. There will always be some particular phase in Medicine which will be of greater interest than others to the student, so that even practitioners in remote villages or towns, away from the great medical and educational centers, may engage in clinical or laboratory research. Robert Koch discovered the anthrax bacillus while doing general practice in a little German town, and finally became one of the greatest leaders in bacteriologic science.

We all know that, in spite of the plethora of physicians in larger communities, there is an actual scarcity of competent medical men in many small towns and villages throughout the country. It may require renunciation to settle in a far-away village, but he who does it will find satisfaction, contentment, happiness and reward in the joy of being the family physician, friend and adviser of old and young, and even a blessing to the community in which he has settled. Such men have been many among our forebears in the profession. There are some today and there will again be many needed in the future.

The greater number of medical graduates will, of course, flock to the larger centers of population, but here, too, in the Medicine of the future, there will be a goodly number of positions which can and should be filled by the physician trained as an all-around practitioner.

Any woman expecting to be confined should not be without at least a month, or better yet two months of prepuerperal care, with which general instruction for the care of the expected infant should be combined. While it may not be possible for every woman to be confined in a maternity hospital where specially trained physicians are in attendance, in the future, when social justice will be an all-important factor in the preservation of the health of a nation,

most confinements will take place in such an institution. There will be no more midwives, for no matter how conscientious they may be, they cannot possess the requisite knowledge to assure safe confinement and pre- and postpuerperal care in certain difficult cases.

PRECLINICAL MEDICINE

The periodic health examination, which is now considered voluntary, will in the future be obligatory for every man, woman and child. It should consist in a careful examination of the baby, at least once a month during the first year; every two months during the second year; every three months during the third; every four months during the fourth; every five months during the fifth; and then the examinations may become semi-annual.

Because tuberculosis, for example, develops, usually, between the ages of 14 or 15 and 20 years—that is to say, between the beginning of puberty and the full growth—there should be a semi-annual physical examination, with x-ray study of the chest, during these ages, so as to discover incipient tuberculosis and to start immediate treatment at the right time and at the right place. If it is only a "suspect" case, the right occupation for the young man or woman should be chosen and prophylactic measures taught, so that danger of a developing tuberculosis may be avoided.

There will also, in the future, be no schools of any size without a school physician or physicians, according to the number of pupils. Every child, before becoming a pupil in a public, parochial or private school, should be vaccinated against smallpox and immunized against diphtheria. Perhaps, by such preventive measures, all the infectious diseases may be controlled in the future. Considerable progress has already been made in this direction.

The B. C. G. vaccines, according to Calmette and his co-workers, among them our own William H. Park, are a reasonably sure preventive of tuberculosis in infants. To Dr. Park we are indebted for his brilliant, life-saving work in developing the antitoxin and toxin-antitoxin for combatting diphtheria. In the prevention of scarlet fever the scarlet fever toxin, used in the same way as diphtheria toxin-antitoxin, has already proven efficient in epidemics. Measles is now treated, either by convalescent serum or by adult serum, the adult having had measles in childhood. There is even

hope of ultimately having a potent serum for cerebrospinal meningitis. During the World War we learned to appreciate the vaccination against typhoid. All this but indicates what can be accomplished in the future in the line of preventive treatment in children and adults.

Besides preventing the development of infectious diseases in the school, the school physician must also be a psychiatrist and well versed in orthopedics. Perhaps better than anybody else, the school physician could insist that the pupils acquire proper posture; and many a physical deformity might be quickly cured by proper orthopedic appliances, by reason of its early discovery. The child who is hard of hearing or the one with defective vision, would also be easily discovered and attended to and, of equal importance, would be the testing of mental abilities or deficiencies, so that no injustice would be done to the unusually talented or to the backward child.

The vocational counsellor, working with the school physician, will be able to give inestimable help in preventing misdirected study or an unfortunate choice of occupation.

In the future, as many do now, every industrial concern or plant employing large numbers of men and women will employ one or more physicians to look after the workers' welfare. In view of the fact that so many diseases have their origin in defective teeth, a dentist will be an important associate of the doctor in the schools and in industrial establishments. These are by no means the only positions which will demand well-trained physicians, able to diagnose any disease, except in the rare instances when a consultation with a specialist may be needed.

There should, for example, be no court to which alleged criminals are brought for trial without their first having been carefully and, if necessary, repeatedly examined, to ascertain their mental status and physical condition.

Of course, in our reformatories and penal institutions in general, there should be, even now, the closest medical supervision to assure good hygiene, proper food, proper occupation, instruction and even helpful distractions, to combat the idleness or dangerous monotony of prison life and treat the diseased mind. In crime prevention, too, the family physician can do a

vast amount of good as the adviser of both old and young.

BIRTH CONTROL

In the medical schools of the future, scientific and safe methods of contraception will be taught; and also how to treat the sterile man or woman who is fit for and desirous of having children. Besides these subjects, legalized sterilization and all that is known of hereditary diseases and eugenics should, of course, also be taught. These are important subjects for the family physician to know and practice. Contraceptive methods will remove anxiety neurosis, which it is well-known may even lead to insanity, in men as well as in the women who fear the arrival of a child which they know they cannot properly support and rear. Proper spacing of the arrival of the children they may desire will prevent the woman from becoming weakened or even ill by reason of too many and oft-repeated pregnancies, and the children which do arrive will be well-wanted and welcome; and a concomitant better economic situation of the husband will enable him to rear them properly.

No one has a better opportunity to help the married couple in case of maladjustment than has the family physician. He will also have many an opportunity to convince well-to-do, healthy and somewhat selfishly inclined couples that it is their duty and to the interest of the one child they are often content with, to have more children. Let such couples bear in mind that one coddled child is very apt to become selfish, and when he cannot have his way often becomes ill-tempered or violent, and in later years, when his selfish desires cannot be gratified, he imagines that he is not appreciated and will seek all sorts of means to purchase this appreciation, if not honestly, then dishonestly. In the families of the rich as well as among the poor, the watchfulness of the physician may prevent the development of tendencies to alcoholic in-temperance or drug addiction.

A moderate number of children (about three or four), well reared and educated, and in whom are instilled high ideals, should be the object of the average family. The well-to-do and healthy portion of the population should be particularly eager to have several such children. Being able to advise the spacing of childbirths, the physician may help to encourage young, healthy people of good moral standing, to marry

early. The great number of illegitimate children and the alarmingly high percentage of young men afflicted with venereal disease would thus be greatly diminished. Here, again, the family physician can make his influence felt for the good of the country and race. The need and reason for this is obvious, for alas, it is now the inferior element in the population which propagates too fast, and these too-numerous children cause many of our unfortunate social conditions, such as overcrowded tenements, unemployment, child labor, truancy, disease and even crime.

My own personal experience in taking histories of many hundreds of tuberculous patients has convinced me that the later-born children in large families of the poor are the ones who contract tuberculosis more readily than the first-born. With the increase of the family there is hardly ever a concomitant increase of the earnings of the father, and the result is under-feeding and less care and supervision, especially of the later-born children, and the mother is, herself, worn out and probably insufficiently fed. The unsupervised boys often join street gangs and many become criminals. I have no doubt that, were it possible to take a census of the criminals in and outside of prisons, this conclusion would be borne out.

FEE SPLITTING

It is not possible to form an idea of what the future of Medicine should or may become without discussing some of the evils or disadvantages now existing in the medical profession, which are, in a measure, responsible for the deplorable economic condition of many physicians and dentists. Let us, therefore, in all frankness and without prejudice, take up that much discussed subject of our times, the division of fees.

"Fee splitting" is a word in itself detestable. The division of fees between consultant and family physician, now often practiced, is unethical and unprofessional, but we must seek out the reason for its existence before condemning it in its entirety, and ask if there are not extenuating circumstances.

Let us visualize a situation which may arise and does arise more often than is known or admitted. A family physician receives for his call \$3.00 or \$5.00. On one of his visits to a patient, he discovers, after careful examination, a typical case of appendicitis. Although the condition

may not be very painful, he knows of the likelihood of its becoming suddenly acute, with sometimes the danger even of a fatal ending, and he advises consultation with a surgeon. The latter confirms his diagnosis, operates, and receives \$300.00, \$500.00, or more. The patient is, of course, out of the hands of the family practitioner until he has completely recovered, and the family physician may have received only another \$3.00 or \$5.00 for accompanying the patient to the surgeon's office or for his presence at the consultation at the bedside.

Would it not be perfectly just and right if, instead of the secret dealings now so often practiced, the transaction should become a matter to be dealt with openly and in all frankness and honesty. When the surgeon is asked his fee for the operation he should state the amount, but insist that the physician who called him in be present at the operation, watch the patient's respiration and pulse, and give additional information about his physiologic idiosyncrasies, etc. For this he should receive \$25.00 if the surgeon receives \$300.00; \$50.00 if the surgeon's fee is \$500.00, etc. In this way, for his presence and help at the operation, the family physician should receive (and the surgeon should insist upon his receiving) an approximate remuneration of about 10 percent of the surgeon's fee, and the patient or his family should pay the family physician directly. The latter certainly deserves such compensation, because of the early and careful diagnosis and because he called in the surgeon at the right time. *He deserves as much credit for having saved the life of the patient as does the surgeon himself.*

In regard to the division of fees in a medical consultation the case differs somewhat. The internist receives a comparatively small fee, yet to prepare the history, urinary and blood analyses, etc., and the consultation itself, all take much more time than a mere visit, and I believe entitle the family physician to a compensation equivalent in proportion to the fee suggested in the case of the surgical consultation, and it should be paid directly by the family of the patient.

What, however, is the physician or young surgeon or dentist to do if a patient comes to him and asks the charges for his advice and treatment and, when it is given to him, replies that by going to such and such a man, such and such a pay clinic, or

such and such a medical center he can get just as good advice and treatment, and at a far cheaper price? Only by an ethical adjustment between institutions and private physicians, and not by putting the latter out of business, can and, I believe, will such conditions be remedied.

HOSPITALS AND CHARITY

Are there, perhaps, too many hospitals or, in some places, not enough? Such questions should and will have to be answered in the future by special committees, composed of physicians chosen from the County Medical societies, the local or State health officers and social workers representing charity organizations. Such a committee should also be called upon to determine what philanthropists, desiring to donate their wealth to the foundation of healing institutions, should do, to avoid unjust distribution and multiplication of efforts.

That there are among the physicians attached in various capacities to public and private hospitals, free clinics, dispensaries, etc., many who have financial anxieties just like the family physician, because so much of their time is given gratuitously, is well known. I really think that it would be but fair if these men should receive a just compensation for the valuable services they now render gratuitously, and very often to patients who could well afford to pay. I even hope that some day a just pension system will be devised for physicians who have served a lifetime as internists or surgeons to private hospitals, as is now the case in municipal and federal institutions.

I may here suggest one possible remedy for the abuse of medical charity in general. Barring accidents where immediate medical or surgical aid is indispensable and life-saving, every applicant for free treatment or treatment at a reduced rate in clinics, dispensaries, medical centers or hospitals, etc., should be required to declare, under oath, the amount of his net income per year. A group of the wisest and best men and representatives of academies and county medical societies should form a committee to determine what class should be worthy and deserving of absolutely free treatment and what minimum honorarium should be paid to private physicians, surgeons, dentists, medical centers, clinics, etc., by applicants for treatment, according to their statement of net income. I do not think that many applicants will commit

perjury. The prices determined upon should be uniform for all and by all, so that lowering of prices for the sake of competition, by institutions or individuals, will become impossible. Such a standardization of prices for medical, surgical and dental services will by no means deprive the grateful patient who is richly endowed with earthly goods, of the privilege to bestow a larger reward on the medical or surgical attendant who has done so much for him in the relief of suffering and probable saving of life.

STATE MEDICINE

One of the most important factors in the Medicine of the future will doubtless be the functioning of what might be termed State Medicine, Official or Governmental Medicine, comprising the activities of Federal, State, and municipal health departments. The beginning should be to have, what is now the United States Public Health Service, become the Federal Department of Health, with its first Officer having a seat in the President's Cabinet, as Secretary of Public Health.

Besides the present admirable work the United States Public Health Service is doing in solving health problems of other than local interest and assisting, in times of emergency, in the prevention of endemic or epidemic diseases, with its increased authority it should be helpful to the medical profession in the enactment and enforcement of wise laws for the public good. It should also serve as a protection against the passage of unwise and absurd laws, proposed by non-medically trained legislators, which often become a hindrance to the legitimate practice of medicine.

With the aid of such a Federal Department of Health, one of the greatest menaces of our time, which in our own country arises from the legitimate but by far-too-great amount of opium imported, and the manufacture of its derivatives, not to mention the large uncontrollable quantities of morphine, heroin and cocaine almost daily smuggled into the country, would be more effectively dealt with than it is at the present time.

Federal, State, and municipal authorities could combine to enact and enforce laws to protect the public against quacks and quackeries, fraudulent claims of sure cures, etc.

State and city departments of health

should maintain laboratories where facilities could be offered to the general practitioner to obtain diagnostic, preventive and curative agents, which he cannot possibly procure from his own resources.

These departments should cooperate with the general profession in educating the masses in the importance of prophylactic measures, such as vaccination, immunization and semi-annual and annual health examinations. They should also determine how many families among those unable to pay a physician should be assigned to a general practitioner and paid for by the municipality or State.

CONTROL OF SURGEONS AND HOSPITALS

To prevent, in the future of medical activities, the very serious and deplorable practice of incompetent persons undertaking to perform surgical operations, there should be, first, a regulation that none except fellows of the American College of Surgeons, or those who have qualified as surgeons before a special examining board, should be allowed to perform capital operations, or call themselves surgeons publicly or privately, so as to obtain cases to operate upon. Exceptions to this ruling must, of course, be made for the general practitioner, in emergency and accident cases demanding immediate surgical intervention.

Every public and private hospital should be licensed by the local or State board of health, and none should receive a license which has not demonstrated to the health department authorities that it possesses a perfect installation, in the form of operating room and sterilization apparatus, in good working order, to insure aseptic conditions. Whether or not it may even be advisable to make contemplated capital operations reportable, will become evident from future developments. We now have, in New York, that fortunate law which does not permit even a therapeutic abortion, no matter by whom, without the Health Department being duly notified.

WE CAN BEGIN NOW

Many of what I hope and believe will be the tendencies of Medicine in the future can begin to be effective very soon, or even at the present time.

The genial and very energetic health commissioner of New York City, the Honorable S. W. Wynne, has already devised an excellent measure, whereby his department has served the community, and thou-

sands of family physicians have become valuable co-workers in the prevention of infectious diseases and at the same time have received a reasonable remuneration. Thus, for example, of 42,541 children examined upon entering school for the first time during 1929, 18,541 were examined by private physicians, and of the 211,985 children who were immunized with toxinantitoxin, 62,583 (more than 30 percent of all children immunized) were taken to the family physician. This is an excellent and concrete example of cooperation between the health department and private practitioners.

We are indebted to Dr. Wynne for another unique institution of incalculable value in the combat of tuberculosis as a disease of the masses which, at the same time, helps the family physicians' livelihood. I refer to the socalled tuberculosis diagnostic stations, operated solely for the benefit of private physicians who are caring for the tuberculous. At these stations, patients are examined only when referred by their private physicians, and the report of the examination is sent to the physician referring the case. These examinations are made by specialists selected from the

younger consultants and the stations are equipped with all modern medical facilities, including a fluoroscope, x-rays, etc. There is no charge to the patient and the station will, under no circumstances, treat him.

The marvelous progress the Medicine of the present has made, since Jenner, Pasteur, Koch, Lister, Roentgen and their co-workers and pupils conferred their discoveries upon the world, is familiar even to the lay mind. Smallpox, typhoid and diphtheria have almost disappeared; tuberculosis mortality is cut in two; life-saving operations, unheard of fifty years ago, are now performed with impunity, and the American surgeons are considered among the foremost in the world in their achievements.

However, there is still much for Medicine to do in the future, in order to become the most important factor in conquering, not only the disease of mind and body, but also poverty and crime, and to bring in the day when social justice shall reign supreme.

May this goal be reached in a not-too-distant time!

16 West 95th St.



The Future of Medicine

By OLIVER H. GRIFFITH, M.D., Wheeling, W. Va.

IN THE hands of a forward-looking medical profession, lies the future of Medicine.

Our profession has advanced more in the past thirty years than it did, up to three decades ago, since the days of Hippocrates. The next decade will show startling advances, especially in the field of chemotherapy. As scientific Medicine has practically abolished diphtheria, plague, malaria, smallpox, yellow fever and cholera, it will abolish measles, scarlet fever, syphilis, tuberculosis, the anemias, acute articular rheumatism and a great number of other diseases.

Infant and child mortality will be still further reduced. The span of life will be still further increased, by periodic health examinations, which will come into more favor as the rank and file of our profession learn to make them, and put the idea over

to the laity, who will demand them, as time goes on; and these examinations will cause more people to come to us for treatment, to learn how to live and to have defects corrected, rather than waiting to call on us when disease has reached an incurable stage.

Preventive medicine will be practiced more in the future than it is now, as the laity are becoming more versed in things medical and will demand that they be taken care of. Dr. W. F. Draper, Assistant Surgeon General, U. S. Public Health Service, said in an address delivered at Washington, D. C., May 18, 1927, that there was an unexplored field of preventive medicine in the *private practice* of the present and the future.

Medical research has put our profession forward and on a sound, scientific

basis, and will make more discoveries in the future. Such institutions as the Rockefeller Institute for Medical Research and the Dermatological Research Laboratories will make more important discoveries, as they have done in the past.

Medical education will go forward in the future, and we hope the time will come when students, at their graduation, will be better equipped in general medicine than they are now.

The specialties will be more practiced, as time goes on, as most recent graduates seem to look forward to becoming specialists instead of general practitioners. But there will always be work for the all-around practitioner, who studies his cases thoroughly and takes a human interest in his patients, not looking upon them merely as cases.

Medical economics is a topic that has not been discussed much in the past, but is beginning to interest the profession. It is a most important subject for the future, as the rank and file of our profession is beginning to realize that they are deficient and lax in the business end of medicine. The subject of lay organizations, such as the Rosenwald Fund and the Life Extension Institute are bound up in the study of medical economics.

The problem of the abuse of the free clinics must be solved in the near future, as this is a serious handicap to the private physician, by reducing his income; and, moreover, he is expected to donate his services if he is in attendance at those clinics.

The cost of medical care is being much discussed at present, and will be more prominent in the future; but State Medicine, or the socialization of Medicine, will never be tried in this country, as we know it to be a failure wherever it has been tried, so far.

Internal medicine will advance more in the future than any of the other clinical branches, because it tends to cure disease in its beginning.

Anesthesia, by means of intravenous injections of such drugs as sodium amytal and others of similar nature, and caudal and spinal blocking, will be more used as more men learn the technic.

The field of therapeutics is one that will advance greatly. Physical therapy will be better standardized than it is now, as, at present, it is on an almost entirely empiric basis.

Diagnosis will assume still greater importance; especially, lesions of the brain will be better and earlier diagnosed than they are now. Brain surgery is now where abdominal surgery was twenty-five years ago.

The Council on Pharmacy and Chemistry, of the American Medical Association, will be very active and will do some work worth while; as will, also, the Committee on Physical Therapy.

Group Medicine will not be practiced much more in the future than it is now, except in large clinics and hospital centers, as the rank and file of the laity prefer to have individual care and treatment, as compared to running them through a medical mill, where the personal contact between physician and patient is lost.

The question of obstetric hospitals is one to be solved in the future. Each rural county should have one, as this work is, at present, poorly done. There is and will be a great demand for trained obstetricians, outside of the larger and medium-sized cities.

President M. L. Harris, in addressing The House of Delegates of the A.M.A. in July, 1929, at Portland, Oregon, said that each county medical society should incorporate and form a medical center, especially in the rural communities, where high-grade medical service could be given the public at a reasonable price. This looks encouraging and will probably be tried in the future.

More autopsies will be held as time goes on, because hospitals will endeavor to obtain them, so as to be kept on the list of institutions approved for the training of interns.

The question of the cults, quacks, charlatans and faith healers will not trouble us so much in the future as it does now, because the public will demand trained medical aid.

The art of Medicine and the science of Medicine must be fused in the Medicine of the future. The rank and file of private practitioners of medicine must see that the Medicine of the future does not swing to either the extreme of an inartistic science of Medicine, nor to the other extreme of an unscientific art of Medicine.

Taking it all in all the future of Medicine looks very bright.

1431 Market Street.

The Future of Medicine

By EDWARD H. OCHSNER, B.S., M.D., F.A.C.S., Chicago
Attending Surgeon, Augustana Hospital

ALONG what lines and in what direction Medicine will develop in the future, depends upon many factors. To deal with each and every one of them from every possible angle would require a book of many pages, instead of a journal article. I will, consequently, confine myself to the one which seems to me to be of paramount importance at this time.

The future of Medicine will, I believe, depend very largely upon whether it will be allowed to develop normally, under the guidance and control of the medical profession, or whether it will be subjected to the paralyzing influence of bureaucracy, on the one hand, or the even greater blight of corporate control, on the other. In the former event, we may reasonably expect continued progress in the future as we have had in the recent past; while, in either of the latter conditions not only will progress be halted, but deterioration and decay will set in. I realize that this is a strong statement, but I believe it is fully borne out by experience. History is a record of our past experiences, but if we preserve it only because it is a record, it fulfills no useful purpose. The chief practical value of history is to supply present and future generations with records of successes and failures of the past, in order that mistakes may be avoided.

Medicine, under the guidance of the profession with a minimum amount of meddling by government and business interests, during the past fifty years has made greater progress than almost any other department, and the medical profession during this period of time has done more than any other like group of individuals to relieve human suffering and increase the sum total of human happiness. It is only within the last few years that lay domination and control has become a serious menace to medical progress.

CARE OF DELINQUENTS AND CRIMINALS

Let us make one or two applications of historical facts in order to show how ineffectual government control of medical problems is.

Individual members of the medical profession have repeatedly called attention to the great need of a careful study of delinquents and criminals, in order to determine the mental and physical condition of each member of these two classes, with a view to their rehabilitation and possible reclamation; and yet almost nothing has been accomplished along these lines by governmental agencies. Dr. Frank L. Rector, who recently completed a survey, under the auspices of the National Society for Penal Information, on health and medical work in all state and federal prisons and adult reformatories, has this to say on the subject: (One hundred of these institutions were visited. Workhouses and county jails were not surveyed nor were the juvenile institutions; i.e., those taking persons under 16 years of age.)

He states, unequivocally, that in not one of these institutions is there a well-rounded and balanced medical and health program. While some of them provide acceptable accommodation for the care of the acutely sick or injured, there is little or no provision for the rehabilitation of the physically handicapped, so that they will be better equipped for earning an honest living after their discharge to civilian life.

As an example of serious overcrowding and lack of adequate medical attention, Dr. Rector states that, on the day he visited the Ohio State Penitentiary, there were 4,475 prisoners within the walls, of which 156 were hospitalized. There was but one physician on the staff, all other attendants at the hospital being prisoners, with the exception of a few guards. While the physician was nominally on a full-time basis, he was carrying on an outside practice, as his salary from the State was insufficient to meet his living expenses.

The day Joliet prison was visited there was a total of 3,053 inmates in the two men's prisons and the woman's prison. One physician, nominally on a full-time basis, had charge of all the medical work at the three places. He too, was carrying on an active outside practice, although there were 45 hospital patients and 16 insane prisoners

on the day of his visit. Physical examination of incoming prisoners and the daily sick-call were held by a "lifer," not a physician, and the physician spent but a few hours daily in his official work. There were no hospital provisions in the woman's prison, although a small first-aid room was being fitted up. Patients were treated in their cells.

At the Southern Illinois prison, at Menard, there were found 1,975 prisoners and 17 hospital patients on the day of the survey. The medical work here is in the hands of a local physician, who visits the prison an hour or so daily and on call at other times. No physical examination of incoming prisoners was made.

At Pontiac Reformatory, with 1,405 inmates, the hospital had 12 patients. A part-time physician and a full-time nurse were employed. Psychiatric examinations were also given to all new arrivals.

With vocational training the conditions are not much better. We are credibly informed that only forty percent of the prisoners in our state prisons are regularly employed in some useful labor, and of this number only a small percent are employed in learning a trade which they can follow after their release. This is but one concrete example of government inefficiency.

Volumes would be required if one were to record all cases of government bungling that occur in the various departments of federal, state, county and municipal governments, in even one calendar year; and yet there are a good many persons in this country who advocate that the government should take over more and more the functions performed by individual citizens. The scientific and economic preeminence of this country is, in large measure, due to the fact that, in the past, individual initiative has been encouraged rather than hampered. Why not take a lesson from the past? I believe, that, in every department, the individual should be permitted to do that which he can do best; the local government that which it can do best; and the state and federal governments only that which the local governments and individuals cannot perform satisfactorily. In other words, home rule even down to the individual, insofar as that is possible, because only in that way can future progress and development be assured. So much for government control of the practice of medicine. How about big business when it enters the practice of medicine?

LAY CONTROL OF MEDICINE

"By their works ye shall know them." We have, in the Public Health Institute of Chicago, a shining example of what capitalists do when they enter the practice of medicine. I have had a photographic copy made of an advertisement found in a toilet room of one of the filling stations of this city which I here produce. Please study this carefully. If

SOCIAL DISEASES
IMPAIR EFFICIENCY AND WRECK HEALTH
THEY CAN BE CURED
WE OFFER HONEST, CURATIVE TREATMENT
PRIVATELY, CONVENIENTLY, AND AT LOW COST
REDUCED FEES FOR MEDICAL SERVICE

WASSERMAN BLOOD TEST	\$ 3.00
GONORRHEAL FIXATION BLOOD TEST	3.00
SVARASAN "606" INTRAVENOUS	5.00
NEO SVARASAN "914" INTRAVENOUS	5.00
MERCURY INJECTION INTRAVENOUS	2.00
URETHRAL IRRIGATION	1.00
SEmen MICROSCOPIC EXAMINATION	2.00
GONOCOCCI VACCINE INJECTION	2.00
URINALYSIS	1.00
BLOOD PRESSURE TEST	1.00
VARICOCELE, HYDROCELE, STRICTURE, GLEET, PROSTATIS, BLOOD POISON, NERVO-Sexual DEBILITY, CIRCUMCISION, AND ALL MEN'S WEAKNESSES AND DISEASES SUCCESSFULLY TREATED	
OUR FEES ARE ABOUT ONE-FOURTH OF THOSE CHARGED BY OTHER PHYSICIANS	
HOURS: 10 A.M. TO 6 P.M. SUNDAYS: 10 TO 1 TUESDAYS-WEDNESDAYS AND SATURDAYS: 10 TO 8 P.M.	
CHICAGO HEALTH INSTITUTE 305 DELAWARE BLDG. — 36 W. RANDOLPH ST. CORNER OF DEARBORN ST.	

that is the kind of advertising which a corporation "not for profit" will put out to gain business, what will corporations be likely to do who would go into the practice of medicine for profit? Further comment is I believe quite unnecessary. The advertisement alone should convince, not only every medical man, but every intelligent layman, that the corporate practice of medicine must not be tolerated in this country.

I believe that lay domination and control of the practice of medicine would be one of the most serious things that could happen to this nation, and hence I would make the following suggestions:

To all government officials and employees of the federal and state governments and all its subdivisions, I would suggest that they bring up all the departments of government, including the administration of justice, to the general level of excellence

at which the science and art of Medicine now stands, and not to encroach further upon the private practice of medicine until they have brought up all government departments to that level. My guess is that unhampered and unfettered medicine will remain so far ahead of them that they will never catch up.

To those capitalists and philanthropists who are constantly meddling with medical affairs, too often to the detriment of both the medical profession and the general public, I would make the following suggestions:

First, that they devise means and methods of preventing periodic financial depression, and thus solve the problem of unemployment which, to the average wage earner, is a more serious problem than even the danger of sickness. The medical profession has conquered all the major epidemics, such as cholera, typhus, typhoid fever, smallpox, yellow fever and malaria. The control of financial depression is, I believe, no more difficult than the control of epidemics and would add nearly as much to the sum total of human happiness as the control of epidemics.

Second, let the capitalists devise means and methods whereby all wage earners may labor under good hygienic working condi-

tions, during reasonable hours, and receive a living wage.

Third, let them join with other groups to abolish or, at least, to greatly reduce human parasitism, the corroding cancer of modern civilization, by devising means and methods whereby remuneration and reward shall be in direct proportion to the time and energy legitimately expended and to the value of services rendered to society in general. If these three problems were seriously tackled they would challenge the best brains of all America and would easily keep the philanthropists, capitalists and industrialists so busy for the next thousand years or more that they would not find a moment's time in which to meddle with the private practice of medicine.

To the medical profession I would suggest keeping up the fight against bureaucratic and lay control unremittingly, by educating all members of the medical profession, as well as the laity, to its dangers.

All citizens are vitally concerned in maintaining the independence of the medical profession and all will suffer grievously if Medicine is hampered and if medical men generally are to become the hirelings of bureaucrats or of lay corporations.

2155 Cleveland Avenue.

The Future of Medicine

By W. FOREST DUTTON, M.D., Amarillo, Texas

THE FUTURE of Medicine is dependent on the appreciation of this art and science by civilized peoples. It should be a constructive force, promoting the development of such noble ambitions as inhere in man, for the pursuit of health, happiness and future welfare.

Art in Medicine exemplifies the application of knowledge and experience, acquired in the school of adepts. The life properly prepared, well qualified, and consecrated to the study of Nature must have ideals which stimulate human endeavor to great thoughts and great actions. A knowledge of the normal functions of the human body in health and of the pathologic defects in disease, gained through observation and experience, is an art rather than a science. It reflects the uncharted course of the Infinite. Scientific

knowledge is a materialistic increment of utilitarian application.

The scientific mind seeks for natural phenomena that can be applied alike to art and to science. To the altruist, science is sacred. The mysteries of the universe and all that is contained therein evoke men of true science to possess them; and the secrets of Nature are reserved for those who seek truth and light.

The achievements of science represent the progress of civilization. In the conquest of science, darkness gives way to light, ignorance is vanquished by knowledge, disease is replaced by health, and physical and mental death is transcended by a spirit which is infinite and eternal.

Eons subsequent to some celestial cataclysm which produced the earth, there appeared on its surface a potent marsh of

various elements. Then, as the result of cosmic evolution, there appeared a microscopic, gelatinous mass known as an ameba. From this source, life, in its diverse forms, has moved ever forward and upward in its development. Life in its every phase involves transformations of matter, marvelous in thousands of processes and astounding in its application to phenomena.

"Ignorance" said Shakespeare, "is the curse of God; knowledge the wings wherewith we fly unto heaven." Natural laws are immutable; the laws of health inexorable; and whosoever is guilty of their transgression will surely pay the penalty. The plagues of Egypt, ascribed to an "act of God," malaria to miasmic marshes, yellow fever to fomites, typhoid fever to bad air and cholera to a demon, are manifestations of the ignorance that prevailed during the middle ages.

Knowledge, expressed in methods of accurate observation and cautious interpretations, demands of scientific investigators, cause for effect. This attained, administrative measures, based upon scientific teaching, will practically clear the world of the dreaded epidemics.

The birth of Preventive Medicine changed moral, spiritual and physical ideals to an appreciation of scientific knowledge. Scientific methods, applied to the principles of sanitation and preventive medicine, have developed a basic system of values, applicable to the activities of mankind.

Science advances step by step, ascending the rough and rugged road over physical and mental obstacles, until it reaches the highest plane of human endeavor. Above this plane rises the spirit and service of science into the realm of beautiful dreams.

CHEMISTRY

Since the emphasis is here to be placed on the methods of attack on the fundamental problems of future Medicine, it may be of interest to consider why chemistry is so deeply involved in life phenomena, as related to the preservation of life. Chemistry is the science whose domain is the study of the transformation of matter. The study of the electron and the atom, in its relation to the cell, starts with chemical processes. It is the threshold connecting life with chemical activity.

The birth, growth and life of the cell

form the basic unit of normal functions. Fundamentally, the problem of health is one of normal physiologic processes. In complete knowledge of the chemical components of the cell and its activities lie the mysteries to be solved by future investigators.

The future progress in Medicine will demand a knowledge of the methods of chemistry. Analysis, the atomic theory, molecular structure, the structure of the atoms, the physiochemistry of the electron, oxidation, synthesis, creative chemistry and physical chemistry will require further exhaustive investigation. Future investigations will eventually result in the revealing of the undiscovered, yet important, hormones of the body. These will contribute to the preservation of the health, happiness and welfare of the human race.

The problems of heredity, natural selection and development have received a great deal of attention. Appreciable progress appears demonstrable, with the collaboration of the biologist and the eugenist. The advent of the automobile and the airplane has not appreciably created any immediate medical problem; but continued disuse of the lower body will eventually have a marked effect on the evolution of man.

A study of the human body as a chemical engine reveals many interesting facts. The production of body heat and its maintenance, sufficient to sustain bodily economy, is a biochemical process. A shifting of electrons from certain carbon atoms to other carbon atoms, with a consequent shift of the hydrogen and oxygen atoms, stimulated by the alkalinity of the blood, is a part of this action. Biophysics is a factor in activating the living engine. Experiments which have been conducted on digestion and transpiration have cleared up some of the errors of the theory of respiration, but still further efforts will be necessary to arrive at definite knowledge concerning the subject.

VITAMINS AND DIET

The growth of knowledge in the field of vitamins began with the study on scurvy. Later researches on nutritional diseases were established in the fertile fields of modern physiology and biochemistry. The practical importance of new discoveries about foods and nutrition serves now as a guiding light in the prevention and treatment of specific kinds of malnutrition and infec-

tions. Sunlight and ultraviolet rays have been influential agencies in stimulating the functions of nutrition. The prominence accorded to the vitamins, at the expense of other equally important dietary factors, detracts much experimental study from the basic principles of human and animal nutrition.

Experimental studies of nutritional problems, during the last four decades, have contributed invaluable knowledge as to the prevention and treatment of dietary diseases. The greatest advancement has been made in the prevention and treatment of rickets, scurvy, pellagra and beriberi. Although there is an accumulation of experimental studies on these diseases, their chemical pathology remains virtually a virgin field.

HORMONES

The internal secretions of hormones offer some evidence as chemical regulators of the body. This regulating system is primitive in character and appears to keep the body working in harmony, through chemical control of the negative functions, such as growth and digestion; reproduction, with its bodily and psychic adaptations, is variously dependent upon hormone factors. These hormones seem to be practicable for interchange from one species to another, indicating their biostatic origin.

Delving into the mysterious actions of these specific substances of internal secretions, a remarkable number of chemical problems are found awaiting solution. It is true that the active principles of certain glands, such as epinephrin, thyroxin, insulin, pituitrin, serve definite purposes. The organs which have shown convincing proof of the elaboration of hormones are the adrenal, thyroid, parathyroid, pituitary, pineal, thymus, mammary, ovarian and testicular glands. There is much evidence to include the spleen, liver, kidneys, brain and heart as sources of hormone functions.

The present empiric application of ootherapy shows a lack of unified scientific acumen. There is an unmistakable need for more exacting researches on fundamentals. A definite therapeutic application requires exact mathematical calculation in the physiochemic and electrochemic test of endocrine dysfunction. This having been secured, the general life cycle will be regulated.

SANITATION

Sanitary measures were appreciated by

the ancients, but they had no concept of the reason, other than cleanliness.

During the past fifty years, sanitation and preventive medicine have shown more in intrinsic values—in life, health and wealth—than in all previous history. This has applied to typhoid, cholera, dysentery, malaria, smallpox, tuberculosis, yellow fever, scurvy, rabies, scarlet fever and diphtheria; in the future it will apply to obscure infections, exogenous poisons, deficiency diseases, cardiovascular diseases and cancer.

The safeguards placed about domestic water supplies, foods, disposal of sewage, industrial poisons and drugs, by the various health services, have materially improved the general health throughout the world. Modern chemical research laboratories and experimental stations, where research chemists will continue lines of investigation and strive to solve the difficult problems remaining before them, are of great moment.

ECONOMICS AND ETHICS

Medical economics and medical ethics, in keeping with medical progress, must become a part of future Medicine. Honesty, cooperation and industry will obviate the commercialization of medical practice. A revision of the ethics and the economics of Medicine is necessary to its constructive and productive advancement.

Success in the development of medical art and science means the creation of new knowledge. Keen observation and productive thinking are the basic needs for scientific progress. Stereotyped opinions, without critical inquiry into clinical evidence, are becoming a trifle shopworn. An appeal to the mass-mind may be sound in principle, for mob violence; but the men who have added to the welfare of the human race throughout the ages are those who have stood for individuality, as against the conclusions of the idolators. They have been crucified for their appreciation of beauty, their love for truth and their creative power.

CELLULAR BIOLOGY

Medical science advances by bringing into life facts and phenomena previously unknown. The living cell is the basis of the phenomena of life. Each cell is a chemical factory. The function of each cell amplifies the condition known as life. Life of the human organism is dependent on the complex function of the innumerable cells

which compose the body. The arterial blood supplies each cell with water, salts, oxygen and foodstuffs; the venous blood collects products of the cell's activities, and herein lies a tale. Each cell, each type of cell, which contributes special activity to the association of chemical processes, is subject to a dominant centralized force—the super-plane of human motivation, matter and mind.

The energy of the body in its various forms is derived from the physicochemical energy of the food, air and cosmic rays. This transformation of matter, brought about by the regulating system, adduces the sum of the chemical changes of the body cells. Any slight variation in these changes results in illness; and any marked deviation, in death.

DIAGNOSIS

The success of future Medicine depends on the progress in the art and science of diagnosis. Certain qualities of natural adaptability are necessary to the physician. The art of Medicine as with all arts, is at its best with the practical education of the five senses. In the absence of such art, the practice of medicine becomes machine-made.

There are three considerations which enter into the making of a diagnosis: The history, the physical examination and the laboratory study. The science of diagnosis relates in part to the laboratory findings, and in part to mechanical adjuncts. Treatment is essentially a scientific procedure, determined by the diagnosis.

A general survey of the activities of the leading medical men, systems of medicine and modern medical institutions throughout the world, leaves the inference that the true art and science of Medicine is in the springtime of its existence. The adaptability, preparation, and equipment of the average physician are deficient. Cooperation, refinement of technic, diagnosis, analysis, synthesis and therapeutic acumen are exceptions, not the rule, in many of the great medical centers.

DRUGS

Experiments made some ten years ago with barbital, introduced intravenously, for the purpose of producing an efficient and safe hypnotic and general anesthetic, are now supported by clinical evidence. Expert chemists in the research laboratories of drug manufacturers and of universities,

are amplifying the investigations and researches made on important drugs during the first quarter of the twentieth century and undertaking to devise practical methods of synthesis for other useful substances. An excellent array of remedies is now available, but further advancement will require more refinement in methods of laboratory experiments and clinical application.

The bacteriologist has contributed epoch-making discoveries to the field of medicine. Without his splendid work, the world would still be subjected to the dreadful scourge of many infectious diseases. He has revealed an abundance of new facts; but pneumonia and influenza still lead in the causes of death. It is quite necessary, for the future welfare of mankind, that the substances which enable us to resist and overcome diseases, and how they act, should be matters of common knowledge. A knowledge of the physiologic and therapeutic effect of drugs is essential to the treatment of diseases.

In order to carry out fundamental work on therapeutics, a scientific knowledge of intravenous therapy and chemotherapy is requisite for practical application. Intravenous therapy is the most scientific method of administering drugs. It is exact and direct in action, requiring a fundamental knowledge of cause and effect for its successful application. Chemotherapy is its most valuable adjunct.

Electrochemistry, cosmic rays, electric waves and meteorological changes, in their various manifestations, will contribute a great deal to the future of medicine.

Much remains to be done before the complete story of the future of medicine can be told. Perhaps this concept would lead to a new and transcendental philosophy, but delving in the realm of metaphysics, at this time would be almost *lèse majesté*.

AUTHORITY AND PIONEERS

Disregard of organized authority is dangerous, and let him who disturbs its philosophic serenity beware! An inquisition for the soul and a broken heart have been the reward for many investigators who had advanced new scientific methods. The guardians of traditional doctrine deemed Faraday's means of producing electricity trivial; Galileo's appeal to the court of Nature, against constituted authority, as impertinent; and Fabre's study of insects as imbecility.

In every country, in every age, there has appeared a destroyer of images, who seeks knowledge for its own sake and considers no labors too arduous, no obstacles too great, if, at the end of the journey, the veil is lifted, revealing the mysteries of Nature. He girds himself with truth and is prepared to attack the citadel of traditional belief. In all ages he is a usurper and is as much unwelcome, in scientific circles today, as he was to the contemplative philosophers of the Middle Ages. Christ was crucified on the cross and Bruno was burned at the stake; but the torch lighted by the divine flame of truth and righteousness ever gives forth its effulgent rays to all civilizations.

The human organism is the present end of all organized perfection; but it does not betray its plan to the uninitiated. In con-

sequence, the progress of physical science is dependent on the triumph of organized mental achievements. The invention of the telescope and the microscope enlarged the scope of the infinite. Matter, time and space are mere terms of unknown magnitude. New worlds and new organisms have been discovered, but not created.

The extension of knowledge is the summation of improved powers of perception. Cosmic rays, transmuted into light, heat and electricity, stimulate the radiations of the mind. In the deep recesses of the memory, time is an ephemeral entity; matter assumes form in the void; space is a symbol of a never-beginning and never-ending eternity. Beyond all this is the land of promise.

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The Future of Cooperation Between Stomatologist and Physician

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IN 1922 there appeared under my editorship a journal, the only one to my knowledge dedicated to "Medical and Dental Cooperation." At that time, it was no more than a slogan used at conventions, dental meetings and introductions to scientific papers before medical and dental audiences. Since then many changes have taken place in Dentistry and in Medicine and their relationship has changed. As a consequence, the whole character of medico-dental cooperation has changed. Instead of being merely a slogan and representing a fad, it appears to me to have become a very serious, vital problem to the future development of Dentistry and Medicine.

This discussion aims to deal briefly with this subject, in the light of our past and present experiences. Let us consider: 1. The types of medico-dental cooperation; 2. the objectives of medico-dental cooperation; and, 3. the desirable forms of medico-dental cooperation.

Professor Eddington, in his closing remarks in his 1927 Clifford Lectures on "The Nature of the Physical World," accentuates the view that scientific progress is

won by a rather slow process of displacement of old ideas with new ones and makes the significant statement:

"Our eyes once opened, we may pass on to a yet newer outlook on the world, but we can never go back to the old outlook" (page 353).

Unfortunately, we cannot say this much for Dentistry and its steps in progress. Some dental practitioners, today—and some physicians for that matter—adhere to an outlook that was considered backward thirty-five years ago. In 1895, the Report of the Committee on Practice of the Dental Society of the State of New York opened with the following statement:

"We are in the midst of a revolution in dental practice. This had its inception when the colleges first began to increase the length of time which students must spend in acquiring a dental education. . . . the man who wishes to remain in the front ranks in the future must be a stomatologist."

If we observe that, in 1930, thirty-five years after the above prophecy was made, the dental schools are moving backward by reducing the dental professional course to three years, and that representative dentists are not ashamed to declare publicly that

dentistry is not a medical specialty, we must consider it very risky to attempt to predict, at this time, the future of cooperation between stomatologist and physician.

Nevertheless, we are in a position to predict some happenings with a degree of certainty. First, medico-dental cooperation of today differs from the cooperative efforts of the past in its being *factual*. Physicians and dentists do cooperate to a lesser or greater extent. Second, the character of present day medico-dental cooperation is *organized* rather than arbitrary. Third, medico-dental cooperation between dentist and physician or physician and dentist (individualistic and arbitrary) is gradually being replaced by the cooperative efforts of the socalled medical and dental professions (collectivistic and necessary). Medico-dental cooperation has assumed a *foundational* character and cannot be done away with even at the will of either dentist, physician or both combined. The collectivistic and foundational character of medico-dental cooperation leads us to believe that, in the future, it will continue as such and, in the course of time, will set up a definite relationship between dentists (stomatologists—the dentist of the future will be educated under the stomatologic educational system) and physicians which will predetermine their cooperative efforts.

TYPES OF COOPERATION

Historically considered, the evolution of dentistry called forth four types of medico-dental cooperation, broadly speaking:

1.—*Social Cooperation* was the first reaction when the medical faculty of the University of Maryland found it desirable, in 1840, not to include dental teaching as part of the medical curriculum.

2.—*Professional Cooperation* was the natural outcome of such social intercourse between physicians and dentists.

3.—*Commercial Cooperation* came, naturally, as a by-product, in some instances, of professional cooperation. Some charlatans and quacks have not failed to abuse a gullible public in this respect.

An illustration of this third type of cooperation, which became most pronounced since the World War, was observed in connection with the exploitation of the principle of focal infection. The extraction mania has taught us no lesson and it continues, in a less stormy fashion. Aside from its detriment to the public, it has given rise to a crop of socalled subspecial-

ists in dentistry—a chronic evil that is still with us.

4.—*Scientific Cooperation* is the final expression of the philosophy of medico-dental cooperation. It takes place where an effort is made by conscientious dentists and physicians to arrive at a diagnosis, scientifically correct, after a careful and thorough search of data in regard to a given patient in need of service.

At the present time it is no longer important to separate the various types of cooperation, since a blending has taken place. More important, however, is it to indicate the direction this cooperative tendency in Dentistry and Medicine should follow. It is, therefore, essential for us to ascertain the objectives behind the various cooperative movements. Broadly speaking, we may recognize three objectives.

OBJECTIVES

1.—*The Therapeutic Objective* refers to that form of medico-dental cooperation where dentist and physician jointly decide on a therapeutic procedure. Due to the prominence which the notion of teeth being responsible for every conceivable disease received in the past decade, this form of cooperation expressed itself in the physician's ordering the dentist to extract teeth—sometimes guilty ones and, at other times, just for good measure.

This type of cooperation has been the greatest obstacle to a constructive program and a closer rapport between dentists and physicians. In reality, this is not a form of medico-dental cooperation at all. It is a prescription for treatment, and implies a diagnosis made by a general physician *alone*, in addition to taking advantage of a granted but unwarranted privilege in the domain of stomatology. The physician's qualification in this respect is another consideration.

The reaction, on the dental side, to this form of cooperation has brought sad results, for it has stimulated antagonism and non-cooperation. It has also brought about the subtle emergence of commercial cooperation.

I question altogether the advisability and usefulness of the therapeutic objective in medico-dental cooperation. Therapy should remain in the hands of the qualified practitioner.

2.—*The Political Objective* refers to that form of medico-dental cooperation, the aim

of which is to keep Dentistry and Medicine separate and as two distinct professions, at the same time maintaining social and professional relationship between practitioners.

This viewpoint appears to be gaining support among some very prominent dentists and also among some physicians, who have not studied this problem. I believe that such a cooperative movement is another manifestation of the rationalizing process in defense of Dentistry's so-called independence of Medicine, on the part of those who fail to appreciate the meaning of Dr. Rushton's statement in his presidential address before the section of odontology of the Royal Society of Medicine:

"A partnership of any kind must necessarily entail a loss of independence, but I have yet to learn that independence is better than co-operation, and I think you will agree that cooperation in social service and in working to prevent and cure disease is a noble endeavor."

It is obvious that the political objective overshadows the more fundamental basis of medico-dental cooperation. I need not point out that, the longer this objective finds its support in the cooperative movement, the farther are we kept away from reaching the true goal of scientific medico-dental cooperation.

3.—*The Diagnostic Objective* refers to that form of medico-dental cooperation between stomatologist and physician where a correct diagnosis is aimed at on the part of either one of the practitioners or both of them combined.

To indicate the desirable forms of medico-dental cooperation that should be fostered and so standardized as to make them universally applicable in our daily dental and medical practice, I will cite two illustrative cases from my private practice.

ILLUSTRATIVE CASES

Case 1: A woman, aged 37, was sent to me by her family physician on October 29, 1929, for consultation to determine the presence of any possible mouth abnormality that may have been responsible for her dizziness, which had lasted for over two weeks; pain in her right shoulder; and pain and swelling in her right hand. Physical examination by her physician pointed to a definite stomatologic condition; improper nutrition; indigestion; low blood pressure; atonic condition of circulation; and chronic entero-colitis, spasmoid variety. Liver trouble was suspected. Before treatment was instituted, a diagnosis of the mouth condition and of the teeth was decided upon.

The patient had had bridgework completed two years previously. Examination of the mouth



Fig. 1

also showed several pivoted roots and swelling of upper right region, from bicuspid to molar area, extending from the buccal side to about the middle of the palate. The palatal area was covered with white, blistering patches.

A diagnosis was made of radicular or dental root cyst in the upper right first molar area, where the bridge was present, and the pathologic conditions were corrected (Fig. 1), after which the dizziness disappeared and the other symptoms subsided. When I saw the patient on March 29, 1930, she was apparently in good health.

Case 2: A man, aged 47 was sent to me by his family physician on April 24, 1930, to diagnose the presence or absence of an oral focus of infection. The patient had been under treatment for "heart trouble" for several months, but the condition did not improve. The patient complained of no pain in the mouth or teeth. Stomatologic diagnosis was decided upon before continuing treatment.

Clinical and roentgenographic examination revealed two suspected devitalized teeth. The lateral incisor tooth had a large pus sac when removed. The patient is still under observation (Fig. 2).

The significant features brought out in these illustrative cases are: (1) These patients would be classified, conventionally speaking, as medical cases (or patients), as distinct from dental cases; (2) they were not dental cases, since these patients complained of no oral or dental symptoms to begin with; (3) physicians instituted medico-dental cooperation by enlisting the consultative services of a stomatologist or dentist, and the results showed that, potentially, these medical cases were also dental cases, their recognition as medico-dental cases being due to the institution of a desirable form of cooperation, from the physician's side, with the accompanying beneficial effects for the patient.

It would be instructive to compare medico-dental cases with medico-rhinologic and other similar types of cases.

Equally important and desirable is the institution of this form of cooperation by the stomatologist or dentist. A considerable number of stomatologic cases have been and may be cleared up by referring such sick persons to the family physician, for physical diagnosis and determination of the patient's general condition.

A third desirable form of medico-dental cooperation applies to persons in apparently good health; that is, to preventive or prophylactic practice. As time goes on and the public becomes more and more educated to place a value on health as they now do on disease, and are ready to consider prevention a "utility" and willing to pay the price for the preventive services of a stomatologist and physician, it will become increasingly imperative for both practitioners to correlate their findings, through some standardized form of desirable cooperation, for keeping their patients in good health.

It is obvious from this brief analysis of the subject that the real value of medico-dental cooperation does not lie in the mere formal procedure of referring patients, but rather in the recognition and correlation of findings as guides to practice.

ONE MEDICAL TRAINING FOR ALL HEALERS

To serve any practical purpose in the future, medico-dental cooperation must first answer several vital questions:

1.—May we hope for a proper synthesis of data and judgments of two practitioners who are educated on varying levels and whose medico-surgical training does not rest on one and common foundation?

2.—Is genuine medico-dental cooperation at all possible when dentist and physician do not speak the same language—one universal medical language?

3.—How may we expect the dentists of the future—the dental profession as a whole, and not a few individuals—to speak the language of their cooperating confreres if they will continue to be "well trained mechanically" and in the basic and medical sciences, as a by-product?

Unless there be instituted one universal system of education for all who engage in medical practice (dentistry is included),

there are bound to be discrepancies between clinical practice and scientific research, as far as Dentistry is concerned. Bodecker has called attention to an analogous situation in histologic research in dentistry, which accounts for the frequent discrepancies between the theories advanced by the histologist and the findings of the clinician.

As far as physicians are concerned, I can see that, in the future, every medical graduate will be possessed of a fundamental knowledge of stomatology. It was not the moral or social phase of medical practice that called forth medico-dental cooperation, rather was it the recognition of the inadequacy of dealing with medical problems scientifically, unless the oral cavity was given its due share of recognition. The oral tissues and the teeth had to be recognized, even though dentistry or stomatology had not been. Here is another instance where Medicine has shown her ability to give way to science and brush aside tradition in recognizing the unity of medical science, as Thomas Huxley well said in 1884:

"Nowadays it is happily recognized that Medicine is one and indivisible, and that no one can properly practice one branch who is not familiar with, at any rate the principles, of all."

I can see the future of cooperation between stomatologist and physician to be on no different plane than it will be between the gastroenterologist, otologist, neurologist and other medical specialists and the family physician. There may be, as a result of this and the advancement of stomatologic science, a decrease in the number of stomatologists, due to the decrease, proportionally, of oral disease. This will, of course, necessitate a gradual transition of the present "autonomous" educational system for dentists, to the "stomatologic" system for stomatologists. In the meantime, we can begin, each one of us, in a small way to lay the foundation for cooperative private practice.

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The Future of Medicine

By J. S. LANKFORD, M.D., San Antonio, Tex.

IN ORDER to obtain a comprehensive view of the future of medicine, some review of the past is necessary, for comparison. With this background, noting prehistoric, ancient and medieval ignorance and superstition, the development of human intellect, the birth and growth of knowledge, and the rapid advance of medical science during the past century, it is possible to predict what may take place.

Man's mind, body and soul have always been in conflict with primeval forces. Terrified by thunder, lightning, volcano and earthquake, he lived in a state of agonizing fear. Superstition possessed him; evil spirits lurked everywhere, seeking to destroy him; his body must be saved. In propitiation he worshipped sticks, stones, serpents, stars. Unclothed and suffering with cold, he became a sun worshiper, perhaps in the last glacial epoch.

With the dawn of greater intelligence, evil spirits began to take on semi-human shape; then came idol worship, the idols assuming the grotesque form of devils. These devils were better controlled by a pleading priest, and that priest was a physician to save the body. Soul salvation was not then considered.

Religion and medicine have always been strangely commingled — the priest-physician; the physician-priest. The priestly medicine man, with his ridiculous garb, song and dance came early. His services were required to drive away evil spirits, and he sometimes cured his patients. This was the beginning of psychotherapy. The medicine man, with the passing ages, began to administer remedies too crude and too repulsive to mention.

The first learning in medicine began in Egypt, where records of ancient civilization reveal a very considerable medical knowledge. Aesculapius, the Grecian and Roman mythologic god of the healing art, embodied all knowledge of medicine. In Homer we have many references to disease and to medical treatment. The Greeks, in the brilliant epoch of Pericles, were well versed in all the arts and sciences, including medicine. Aristotle, Alexander's

tutor, was, not only a great scientist, but had a good knowledge of anatomy, physiology and botany. He knew the medicinal properties of many plants. Hippocrates, "The Father of Medicine," was thoroughly acquainted with everything pertaining to the medicine of his time, and was a great leader. His exalted idealism has been the standard for the medical profession and a great inspiration.

Galen assembled and applied all available knowledge and was the blazing light of Medicine for centuries. After a thousand years, at the end of the Dark Ages, it was found that the dead languages, Greek and Latin, had preserved, intact, all the valid knowledge of the past.

During the supremely active period of the Renaissance, Medicine, along with art, painting, sculpture and astronomy, sprang suddenly into new life. Da Vinci, whose great versatility led him, scintillating, through every path of human activity, was a great anatomicist. It was probably he who discovered the circulation of the blood. In a recent translation of his voluminous diary, it was found that he had drawn a human heart and large blood vessels and had written, "The blood moves." And he indicated the direction with arrows! Harvey was a cultured man, and Italian scholar, and he studied for three years in Italy. Da Vinci was an accomplished illustrator of anatomy. Is it not possible that Harvey obtained his idea from Da Vinci, who drew his sketches a hundred years before?

That was a great century of progress. The Medici, Cellini, Raphael, Michael Angelo, Copernicus, Bruno, Martin Luther and many others were waking up the sleeping world. And at the end of the century came Queen Elizabeth, Galileo, Harvey, Bacon and Shakespeare, another man who compassed all human learning. Perhaps the best account of the Medicine of this time may be found in Shakespeare's immortal pages.

Later still came Linnaeus, with his marvelous knowledge of botany; Laennec, with the stethoscope and auscultation, and Jenner,

with vaccination, the beginning of work in the great field of serum and vaccine prevention and therapy. But, in spite of increasing knowledge and much advancement in the science of medicine, the profession remained steeped in deep ignorance concerning many things for several centuries and blundered along in the dark, though always seeking light. Little was known about diagnosis or treatment; remedies were the crudest; the barbers were the surgeons. The race stood appalled and panic-stricken before the plague or other fatal epidemic.

THE PAST CENTURY

During the last hundred years Medicine has made more progress than in the previous twenty centuries. Yet, in the beginning of that century many ridiculous conditions existed. It was the great antiphlogistic era. Fevers—inflammation of all kinds—must be treated heroically; bleeding, puking, purging, salivation and blisters. No bath, no water allowed in the hottest fever. This treatment prevailed for a generation or more.

Then came the pathologist, the physiologist, the biologist, the vivisectionist, establishing Medicine on a scientific basis; aiding in diagnosis, suggesting better lines of treatment. Records were kept, diseases were classified, treatment became more sensible. Long and Morton appeared in the forties, with anesthesia. Surgery and obstetrics were rendered painless—the greatest blessing that ever came to humanity.

Pasteur, destined to enrich medicine as no other man ever had, was coming into prominence. His application of the knowledge of bacteria, his profound researches and original methods established bacteriology on a scientific basis, to the everlasting benefit of mankind. Then came antiseptics and disinfectants and a brilliant period in surgery, without parallel. The whole field of Medicine bounded forward with startling rapidity: Koch discovering the tubercle bacillus; Klebs and Loeffler—the diphtheria bacillus; the latter event quickly followed by the development of antitoxin and the reduction of mortality in diphtheria, from thirty to forty percent, to less than one percent. Wonder succeeded wonder, in this and many other fields.

Brown-Séquard and Sajous opened up the marvels of the endocrines and organotherapy; instruments of precision in diagnosis arrived, with more information con-

cerning symptomatology; electrotherapeutics and mechanical therapy developed; new drugs appeared, especially the synthetic products; dietary knowledge was broadened, particularly with regard to the all-essential vitamins; hospitals, nurses, clinics of high standard came, with better medical education, better doctors, surgeons more skilled, many useful specialists, accurate diagnosis, successful therapeutics and, altogether, we have reached the greatest era in the history of medicine. Among other things, much has been done for the promotion of the public health and for the prevention of disease. What do we lack? What may we expect in the future?

Superstition and ignorance are vanishing; common sense holds sway; vagaries and follies are passing; scientific attainment is measuring up higher all the time, with increasing educational opportunity, and there is reasonable hope of great achievement along many lines. Some of the things that will probably happen will be discussed in limited way.

EDUCATION

We have high-class hospitals, efficient nurses, great clinics and good medical schools, but something—some adjustment—is needed in the curriculums, which are long-drawn-out and time-wasting.

A way will be found to discover aptitude earlier; then, when a boy has signified his desire to become a physician, he should be prepared along every line that will make him most useful and be permitted to advance according to aptitude and study. By well-directed effort, shortening some courses and eliminating one extra language, there should be no difficulty in reducing the premedical course one year. No dullard nor any boy or girl of commercial instincts should study medicine. It is a calling requiring not only intelligence, but idealism and the fires of imagination to serve in it successfully. Mental tests and high character will be required in the future.

The first two years in a medical college should be given to basic technical training; the second two should certainly emphasize the clinics, and lean toward some special bent—internal medicine, surgery, obstetrics or some other special line, as desired. There will come a better understanding and closer co-operation of the physiologist, the laboratory expert and the clinician, both in training and practice. Each is claiming too much; each needs the other. As it is, when the course is finished, the

doctor is prepared only to treat a case, not a patient and a human being.

Standardization and group practice threaten to submerge or destroy originality and individualism. There will be a swing back, in a few years, and great leaders will point the way again to the freedom and joy of individual achievement.

DIAGNOSIS

Bedside training will do much to advance a proper understanding of diagnosis, but some coming instruments of precision will do still more.

We will soon have a small, convenient electric stethoscope, with an amplifier, which will give us new ideas and much information. Normal heart sounds will be better understood and the significance of murmurs, in diagnosis and prognosis, will be clearer. It will be quite possible, with this instrument and auscultatory percussion, to outline the heart, liver, spleen, kidneys and other organs. The organs will be heard functioning, the normal sounds ascertained and pathologic abnormalities recognized and described. All the organs pulsate, in a manner similar to the heart. The sounds of the circulation in the larger blood vessels will reveal health or disease. Strength and weakness will be measured by the sounds of the muscle fibres in tension. Abdominal sounds will reveal much information and pathologic conditions of the gastrointestinal tract will be discovered.

Another instrument will be devised to combine a graphic record of the heart action with its sounds and murmurs. Such an instrument would explain some things that the sphygmotonomogram and electrocardiogram now leave in the dark.

CARDIOVASCULAR SYSTEM

In addition to new light on diagnosis, there is good promise of checking the rapid increase in heart disease, by a clearer conception of the causes and by education. Undoubtedly the increase is due to infectious diseases in childhood, to neglected focal infection in all ages, to the speed of life and to chronic constipation and autotoxemia. These things can all be corrected and education will do much. Other great remedies will be found, especially in synthetic products.

TUBERCULOSIS AND CANCER

The "great white plague" promises to be conquered by education and prevention

before a cure is found. Possibly that will yet be discovered, along the line of tuberculin treatment.

The great curse of cancer hangs over mankind like the sword of Damocles; but, with the vast research going on all over the world, a cure is sure to come at no distant day. Perhaps the cause may be an abnormal ferment, as suggested by Murphy. This would seem reasonable, when we consider the great change in our dietary, with the addition of many indigestible items, especially the enormous increase in the use of sugar and other carbohydrates; and the further fact that a very heavy percentage of the recent increase in cancer has occurred in the gastrointestinal tract. If so, the prevention is obvious and the outlook for relief may not be so bad as it seems.

THE GASTROINTESTINAL TRACT

Parathyroid tablets, 1/10 grain (6 mgm.), with some good preparation of calcium and suitable diet, cure gastric and duodenal ulcer. When this is fully recognized, there will not be so much surgery in these cases. Half of the diseases of humanity arise from over-eating, errors in diet, indigestion, constipation, defective liver function (particularly its detoxicating work) and autotoxemia. The majority of cases of chronic arthritis come from this source, and a vaccine will be found that will cure. By proper diet, exercise, hygienic living, and limited dosing with the right medicine, the basic condition will be relieved. Cardiorenal disease, in many cases, originates in intestinal autotoxemia and is preventable.

DIET

Through our scientific knowledge, we are getting back to a varied vitamin diet, such as the old cooks of fifty years ago supplied by some intuitional wisdom. We know that we must, not only have mineral salts and proteins, fats and carbohydrates of sufficient caloric value and of proper percentages, but also enough of the vitamins A B and C; and now D and E have come, the former all-essential in calcium metabolism. There will be others. We will have synthetic foods in great quantity, to save the world from starvation. The possibilities of irradiated foods are boundless.

VACCINES AND SERUMS

Tremendous things have been accomplished in the field of serums and vaccines. None know this so well as those physicians

who remember a diphtheria mortality of thirty to forty percent. But the future will bring prevention, cure and immunity, until infectious diseases will be brought under complete control, to the saving of life and an immense increase in human happiness.

SURGERY

It might be thought that there are no more triumphs for surgery, in this day of antiseptics and skilful technic, but these things will be improved; better antiseptics will come and many new operations will be devised. Brain surgery has not reached its limit. Nerves will be grafted, in neuralgic and paralytic conditions, and abdominal surgeons will make an effort to improve the function of the great sympathetic system by surgery. Other ventures will be made. Perhaps best of all, the surgeon will learn when not to operate. Other anesthetics will be discovered to aid the surgeon.

Urology: The genitourinary surgeon might well operate oftener, when general disease is not too extensive. It is highly probable that parts of kidneys may be grafted, after traumatism and in other conditions. Certainly more powerful urinary antiseptics will be found, for the cure of pyelitis and similar states.

Obstetrics: The great need in obstetrics is for better care of the poor in the slums of cities and in remote rural districts. This will be accomplished by furnishing physicians, trained nurses and hospital care at public or private expense. The mortality among mothers will be further reduced and a vast number of children will be saved from blindness. Much of this will come through education. Women will be further blessed by gynecologists coming to the full recognition of the fact that many cases of female disease are endocrine in origin and curable by organotherapy.

The otorhinolaryngologists and ophthalmologists will find much to do in preventing hay-fever and asthma, by skilled attention to the nose. They may not hope to help the deaf much, but new electric devices will solve the problem for them. Their greatest outlook is for increased service in using organotherapy for the treatment of many different diseases of the eyes. When early diagnosis is made, cataract, glaucoma, neurochoroiditis and other diseases are amenable to this treatment. The explanation is simple. A study of the

embryo, at the third week and subsequently, shows that most parts of the eye come from the ectoderm—the same structure as the skin. We know that thyroid substance will perform a miracle in myxedema, a disease that markedly affects the skin. Why will thyroid substance not relieve edema, pressure and inflammation in the eye, which springs from the same structure as the skin? It does! The future here is very promising.

THE ENDOCRINES

The most fertile field of all is endocrinology. One broad prophecy will cover it. The active principle of each gland will be discovered and will be available in soluble, crystalline form or in solution; accurate diagnosis will be made of all insufficiencies and of all over-action; organotherapy will be prescribed to meet the conditions exactly; and the miracle of the ages will occur in the restoration of organs, functions, blood and health, with incomparable beneficial results to the body and mind and to human prosperity and happiness. This will come during the next quarter of a century. In this study, the physiologist should leave more to the clinician. There is a great difference between the normal animal and the diseased human being.

MIND AND NERVOUS SYSTEM

The greatest development in neuropsychiatry will be the discovery of the fact that a large percentage of insanity is of endocrine origin and curable by organotherapy. Occupational treatment will grow. Neurasthenia, the greatest trial to the doctor's patience, is due to endocrine dysfunction, and so with many other nervous diseases. Many nervous diseases of obscure nature yield to endocrine therapy and antisyphilitic treatment, though the Wassermann test may be negative.

Physicians will come to realize the vast importance of the spinal cord reflex centers that govern the organs of the chest, abdomen and pelvis and the remarkable results that may be produced on the functions by stimulating these centers by special exercises.

PHYSICAL THERAPY

Though much has been accomplished by physical methods of treatment, the promise for the future is far greater, especially in connection with light and electricity. We

will learn that the body is a living electro-mechanical machine, run largely by the endocrine secretions. Every organ is a different grouping of electrons and protons. In the not distant future, the exact disturbance of this delicate mechanism in pathology will be known and we will have the proper remedies for restoration, in light and electric appliances.

THE BLOOD

It will not be many years until we are better informed about the blood, especially the plasma, of which we now know so little; also about immunity, heredity, character, racial characteristics, the difference in human creatures and even paternity. All of these things will be cleared up and there will be great possibilities for human happiness, in companionability, and for eugenics, in proper mating.

DRUG THERAPEUTICS

We have passed through the nauseating tea and decoction age, to active principles, alkaloids and more pleasant forms of medicines, and now we have reached synthetic preparations of great accuracy and effectiveness. There will be many more of these effectual remedies within a short time.

Organotherapeutic products will come more and more into use, but there will be a constant tendency toward smaller doses.

PSYCHOTHERAPY

The "medicine man" had not much else, therapeutically, than his work upon the mind. After all our learning, the majority

of human ills must find relief in faith—psychotherapy. Christian Science will become in the next few generations one of the strong churches, but much less of a system of cure. The medical profession will have appropriated and incorporated this and all other worth-while faith cures in scientific psychotherapy.

The most successful physicians, now, are those who kindly and wisely dominate the minds of their patients. The competent physician of the future will consider his patient as a human being, with a body that is disordered and a mind full of trouble, and great things will come from a deep understanding of the troubled human creature, appealing for relief.

PREVENTIVE MEDICINE

The prevention of disease is, after all, the chief privilege and duty of the physician, and here lies the greatest possibility of the future.

The cultured physician will be employed by the state, the city or the individual, to prevent all diseases of the body and mind, and will become an expert in this line. Then will he become the uncrowned king of the human race, preventing all suffering, a solace to the soul, a creator of human happiness. Then the great Pasteur's prophecy will come true: "My invincible belief is that science and peace will triumph over ignorance and war; that nations will unite, not to destroy, but to build; that the future will belong to those who have done most for suffering humanity."

214 Gibbs Bldg.



DOCTORS OF PREVENTIVE MEDICINE

The classical picture of the doctor with a barrel of tonsils on this side and a barrel of appendices on that side is now being replaced by the doctor who has a series of records of children who have been brought up through health instead of through disease. In other words, people are looking to a doctor who will take them around disease instead of going through it and over it—doctors who will be able to advise them how they can, with all human probability, avoid the great mass of these repeated wounds that strike small children because of unintelligence on the part of mothers who bring them up.—DR. H. EMERSON, New York, in West Virginia M. J., Oct., 1929.

The Future of Medicine

By J. LEWIS WEBB, M.D., Chicago, Illinois

EVERYWHERE and always, things found unsatisfactory or disappointing are eliminated. This inescapable law is enforced unanimously by Providence, Nature or God and by mankind. It applies to governments, animals, gods and machines, as well as to medical theories and practices. Today has a tremendous junk pile for a background. The ages have produced surprisingly little worth preservation. Time will tell if the present civilization is to be junked, or if man has now developed to a state from which continuous upward progress is possible without further relapses.

No gift of prophecy is necessary to foretell that the public will eventually receive a health service approaching a state of perfection. Probably many experiments and temporary expedients will come and go as this progress is made. Physicians need not apologize when they admit that much of today's medicine is doomed to be discarded. Religion is the only field that claims present-day perfection. Every other activity anticipates future improvement.

Some timid physicians feel that those of the past imposed upon the people when they sold treatments which were later abandoned, and that we should hesitate to ask to be paid for a treatment we, in our hearts, recognize is less than perfect. This attitude delays advancement. The radio is an example with which we are all familiar. A very few years ago we paid money for imperfect machines. The ones we buy today will admittedly be obsolete in a year or two, yet it is only because we buy and pay a profit to the men developing this apparatus that we can expect a better service in the future. So long as the best available service, for the time and place, is delivered, no condemnation is appropriate. History proves that Medicine has always been in advance of government, industry and other types of service. This is true today and should make physicians proud, instead of apologetic.

A very wise man discovered that "The customer must be satisfied." Prosperity comes to those businesses which makes this a fundamental rule. Because physicians are reasonable men, we anticipate that

Medicine will develop under this rule. Medicine has suffered through having allowed such slogans as the following to prevail, at times: "The diagnosis is the thing;" "Disease is self limited."

MEDICINE'S CUSTOMERS

Medicine has two customers: individuals and industry. The Church and the State become customers of medicine only upon the insistence of individuals or of industry. The visualization of what these customers want will give a picture of the future of Medicine. A medical profession that would neglect to develop the services of the desired type would discover that the public was giving its support to some other group that was providing the type of service sought.

The individual wants a health service that brings him to maturity, as little handicapped by physical and mental deficiencies as is possible. He wants a health service that minimizes the distractions due to personal or family illness and secures the least interference with his comfort and earning power during his vigorous adult years. He wants a type of health service that prolongs his active years and makes for an old age as free from discomfort and dependency as is possible.

Industry is interested that individuals receive service of the sort just described, because that means greater efficiency among employees. It also means that people earning money in other plants are prospective customers.

Industry and individuals are both interested in a health service that will reduce dependency and pauperism, because the industrious are taxed to carry those who are non-producers.

Medicine must solve the problems connected with being well born and properly reared. Mental and physical deficiency and dependency depend more upon being poorly born and brought up than upon anything else. Medicine, educators and industry will undoubtedly cooperate, so that parents, in the future, will not burden themselves and society so frequently with children, born to be deficient, dependents and paupers. Today, having children is

about all poor and deficient people can do unhindered. When society attacks this problem seriously, medicine will be expected to render an obstetric and pediatric service of a type not yet even approached.

INFECTIOUS DISEASES

Infectious diseases lay a burden upon society. Medicine has an opportunity to concern itself with these diseases, which fall into three great groups: Those conveyed by food and water; those conveyed by sexual contacts; and those conveyed by air.

A few years ago, Medicine was largely concerned with treating those diseases conveyed by food and water. Today this constitutes but a small part of active practice.

It is reasonable to believe that the future is to see individuals intelligent enough to realize the foolishness of exposing themselves to the discomfort and expense incident to the contracting of either of the so-called social diseases. A people that now realizes the foolishness of sleeping with smallpox patients can be expected to realize the foolishness of contact with infected sexual partners.

It is surprising to discover how crude our methods of ventilation still are. They consist of an open window, to permit the mixing of impure indoor air with impure outdoor air. We have remained unconscious that the persons about us are exhaling infection and excrements from their lungs and that the air is contaminated by body odors and intestinal flatus. Very often the air we are breathing is as filthy as the water of a public beach, in which thoughtless people dispore themselves.

Undoubtedly, the future is to see the development of machines, to be built into homes, churches, theatres and other places, that will purify the air entering a building, and perhaps circulate it and repurify it and finally discharge it out of doors, free from noxious materials. It may become as important for a host to provide clean air as it now is that he provide safe water. The expense need not be greater than that now involved in the plumbing, heating and refrigeration equipment accepted as necessary. Medical practice, with infectious diseases eliminated by the methods outlined, will be very different from what it is today.

Chimneys now belch clouds of smoke from coal-burning furnaces. Under the influence of those interested in the promo-

tion of oil and gas burners, a movement is growing to abolish these smoking chimneys and replace them with those giving vent to invisible gases. So far as we know, men do not suffer disease from this source, provided the gases are properly diffused. It is probable, however, that society will demand that chimneys be isolated in less populous centers, much as tanneries, glue factories and other offenders now are.

It is impossible to imagine the future of Medicine consisting of a multiplication of present-day dosings, injecting, vaccinations and similar treatments, in lieu of the methods just outlined.

Medicine will always have to care for accidents and for instances in which sanitation breaks down. Obstetrics, surgery, pediatrics, psychiatry and industrial medicine will develop to a perfection approaching the fine arts. Life, unaffected by infectious diseases, means an old age complicated by less suffering and dependency than exist today. Medicine will be absorbed with problems of physiology, pathology, nutrition, psychiatry and with occupational and sexual adjustments.

It does not seem possible that clinics, state medicine, insurance medicine or private practice is ever to be in full control. For a time, one or the other of these may seem to be usurping the stage but, because each is necessary to a perfect health service, none will ever disappear. The individual will always have the private practitioner; industry will probably aid in the further development of clinics; the State will assume full responsibility for the permanently disabled, deficients and paupers.

FAME AND PROBLEMS

A generation ago, Rush, Senn and others were thought to have made their memories permanent. Before them there had been a succession of others, famed for a day. Today, buildings and institutions, once "pointed to with pride," are surpassed by later institutions, named for later leaders. Today men are busy building monuments and other men are worrying about them. In the future, these institutions and buildings will be regarded as obsolete and in the way.

Hippocrates, Koch, Pasteur, Hutchinson and Harvey built no great stone buildings and introduced no remedies of immediate commercial value, but their names will survive when the present memorial halls have crumbled, because they devoted them-

selves to problems that will be important as long as humanity exists.

Today we are in a frenzy to discover new remedies and treatments. Under present-day conditions these can be financed when a marketable product is discovered. It is to be regretted that Organized Medicine is neglecting to busy itself with many real problems that must ultimately be solved. Investigation of these must be financed in ways not yet instituted, because no marketable product can be expected to come from their study. Quinine is the only chemical that has maintained itself through a period of years. The final solution of the problem of malaria will cause the discoverer of quinine to sink into the realms of the forgotten.

Out of the present turmoil regarding the cost of being ill, society is, apparently, coming to see the light. Health service costs money, and its cost must be recognized and budgeted into individual and industrial financing. Inasmuch as the entire income of many is absorbed by food, fuel, clothing, etc., it becomes a duty of the medical profession to insist that wage scales be adjusted to include sufficient to provide for health service. This will necessitate intelligent and open propaganda to educate employers and employees to this truth. It may necessitate that the medical profession take an active part against high-pressure selling methods and toward the curtailment of installment buying, through which some people are led into mortgaging their future earnings too heavily.

Just now, medicine is confronted by three major problems: Who is going to assume the responsibility for conducting research into medical problems—the med-

ical profession, philanthropists, pharmaceutical manufacturers or the State? Shall the medical profession grasp and maintain full control of the science and business of Medicine; or be the "poor relative" of philanthropy and State, Industry, the Church or the manufacturers of popular remedies? Is medicine to be broken up into private practitioners, industrial surgeons and public health doctors?

The medical profession will be compelled to continue to render service. Will this be as the masters of their ship; or as the galley slave who pulls an oar at a master's bidding? The gift of prophecy is needed to foretell whether the future is to see more and larger corporations retailing physicians' services; or a profession composed of efficient, prosperous, independent, respected men. We very much prefer to vision physicians of this latter type, rather than as a group punching a time-clock and living upon a dole from boards of directors, composed of bankers, merchants and other business men.

This may seem impractical and very much like a graduation-day thesis. It has this practical and personal application: The physician who is satisfied with today's theories and treatments is not advancing. The man who sees the possibilities ahead and is striving toward their attainment is, every day, a better physician. His patients are in good hands.

The attitude of the profession toward advancement determines, in a large measure, how rapidly that advancement can take place. There is no doubt about the future of medicine. The question is, how directly are we traveling toward our goal?



THE DOCTOR AND THE PATIENT

Is it not possible that our twentieth century medicine, in its laudable search for scientific accuracy, its elaborate researches and the multiplicity of laboratory detail now considered so essential, has a tendency to ignore and more or less neglect the patient as an individual?

The outstanding criticism of past patients of medical men is that their former physician was always in too much of a hurry to do the best work and that he frequently revealed a lack of personal interest in the patient as an individual, which the latter deeply resented.—DR. E. J. G. BEARDSLEY, Philadelphia, in Ohio State M. J., Nov., 1929.

The General Practitioner and the Future of Medicine

By G. J. WARNSHUIS, M.D., Milwaukee, Wis.

AN ATTEMPT to measure the future in terms of the present and its relation to the past is an exceedingly difficult undertaking, and one that is likely to lead to false conclusions, colored to a large degree by the temperament and personal experience of the prognosticator.

The present-day practice of medicine is beset with many difficulties. As experimental and clinical research increases our knowledge of pathologic processes, we find that, with our improved insight, our problems have become greater and more perplexing. Increasing specialization involves greater cost of medical training—more post-graduate work and study—and often places upon the general practitioner the necessity of referring many of his more lucrative cases, that he may be quite competent to handle, merely because the public has come to expect such conditions to be handled by a specialist. The specialist, instead of giving his support to the general practitioner whom he expects to send him work without any recompense, is often found encouraging this very state of affairs.

This condescending attitude of the specialist is by no means universal, but it is an element that seriously affects the relationship of the general practitioner to his clientele. It should not be necessary to remind ourselves that there are just as many able men in general practice who, through preference or because of lack of opportunity, have not seen fit to limit themselves to certain classes of disease, as there are in the specialties. Furthermore, the best specialists are those who were first good general men.

Economic changes have brought about an increasing diversification in medical practice. Thirty years ago, the industrial surgeon, the public health officials, the research men, the teaching faculties, the alienists, the hospital superintendents and other institutional staffs, were represented by a small minority of the profession. The increased financial support to institutions and public health work, as well as the growth of our industrial organizations, has greatly ex-

panded these special fields for medically trained men. These developments, together with the greater ability of the public to pay specialists' fees, with improved transportation facilities and the consequent greater inducement to specialization and office and group practice, has greatly reduced the proportion of "family doctors" to the total numbers in the profession.

THE MEDICAL COUNSELOR

Is it not likely that we have gone too far in this respect and that a great and most useful class of medical men is suffering disadvantages that are, not only disheartening to them, but are likely to discourage the younger recruits from entering general practice? We read and hear a great deal of agitation about the disappearing family doctor, but has anyone seriously inquired into the real reasons for this state of affairs?

When we think of the number and the strength of the forces at work to encroach upon and belittle the activities of the family doctor and the public nature of his work, the conclusion becomes evident that there must be a high degree of merit in his services to account for the fact that he has been able to survive at all. On the one hand, there are the specialists, the free clinics, and the health clinics; on the other hand, there are the irregulars, the cultists, food faddists, drugless healers, patent medicine vendors, all exerting themselves to divert patients from the advice and attendance of the family doctor.

Occasionally, however, we find a family doctor here and there who, in spite of all these harassing elements to contend with, is able to "stay in the middle of the road"; who treats his following honorably and wisely and with positive results; who, through the strength of his personality and his energetic application to the problems of his work, is able to command respect and enviable compensation. Such a man is always tactful; he is a good judge of character, he knows when to be amiable and discursive, when to be severe and commanding, he makes friends of his patients, en-

courages them to give him their full confidence, and shows by his manner and conversation that he has a sincere and intelligent interest in their welfare. He exerts himself unceasingly in improving his skill and his methods. He watches that he does not get into rule of thumb, slip-shod ways of treatment and snap-shot diagnoses. Having made a diagnosis he is not content until the results prove the correctness of it. He is resourceful and decisive, because he has exhausted every available means to prepare himself for any contingency.

A doctor of this type remains in general practice because he does not wish to limit himself to a narrow field. He is interested in all the functions and organs of the body. He has equipped himself to deal with all sorts of medical, surgical and obstetric emergencies. Before the patient gets to the specialist, he makes the diagnosis and determines what sort of special treatment is required. He might be called a specialist in *common ailments*. When he calls upon a specialist, in consultation, it is because he has encountered something quite unusual or a case requiring a form of surgical treatment for which he lacks the special training, such as passing a bronchoscope or catheterizing the ureters.

The most important problem that concerns the future of medicine is the instituting of measures that will encourage more men of this caliber to enter and stay in the general practice of medicine. To accomplish this, it is necessary that we first of all recognize the fact that the family doctor is something more than a pill peddler, a midwife and a go-between of the laity and the surgical specialist. His relationship to the public is, broadly speaking, that of *medical counselor*. He should be a scholar of broad information on all the subjects of diagnosis and treatment and, when he is such, due recognition and respect should be given him. No greater position of trust and confidence can be given a man and just for this reason every inducement should be placed upon him to merit this confidence. We can get along with a great many less specialists. With fewer specialists and more medical counselors, the specialist will not feel the necessity of "stealing" patients from the family doctor. He will be more inclined to cooperate with him, to encourage his patients to seek the advice and treatment of his family doctor, and he will be content to

take such cases as the judgment of the family doctor indicates are handled to best advantage in that way.

One of the first steps in accomplishing this program is for the general practitioners to assert themselves more, to improve their methods individually, to become organized, drop their petty jealousies and grievances, and adopt a higher standard of ethics—practical ethics, and not high-sounding generalizations.

It has been said that medicine is both an art and science. The principles and facts gained through experimental and clinical observation have reached a state of scientific development far ahead of the facilities for their practical application. Thousands of people die yearly in this country from preventable diseases. In spite of the great advances in surgical technic, the mortality from surgical diseases such as appendicitis, gall-bladder disease and goiter has increased enormously in the past twenty-five years, even if we discount the increase due to improved methods of diagnosis. Although the average longevity has increased, the expectancy of those past 45 has decreased.

The present generation in medicine has been largely under the influence of the brilliant bacteriologic discoveries and the progress in microscopic anatomy of the latter part of the 19th century. It has led to an attitude of regarding disease as a result of microbial invasion of a previously healthy body. This again has had its influence on treatment, by directing attention to means of directly destroying the invader or eradicating the infected tissues.

FUNCTIONAL AND PSYCHIC PATHOLOGY

A new era is now dawning. The development of modern methods of chemical analysis, physical chemistry, ultra-microscopy and the synthesis of complex organic compounds has opened the way to the exploration of a magic world of intermediate metabolism and functional pathology. The relationship of the endocrines, the inorganic salts of iron, calcium, potassium, sodium and phosphorus, the hydrogen ion, colloids and ionic solutions and the vitamins, to nutrition and resistance, is coming to be better understood and must lead to decided changes in methods of practice.

While anatomic relationships and morphologic changes in disease are just as important as they always were, their effects on organic function and the signs and symp-

toms of functional disturbances are now receiving more attention. More precision and greater discernment is possible in determining the degree and character of the disorder. For example, in cardiology, the emphasis from the signs of valvular lesions has shifted to methods of determining the condition of the heart muscle and its ability to meet the demands placed upon it.

The researches of Cannon, Draper, Keith, Sir Arbuthnot Lane and others, on intestinal peristalsis and intestinal stasis, with and without constipation, have not been without their influence on medical practice, particularly in developing more refined, more effective and more lasting methods of correcting disorders of this nature. Even in this field there is still a great divergence of opinion and practice and we can look forward to much progress in the way of greater refinements of diagnosis and more standardized methods of treatment.

To the outsider, it must appear as though the many variations of individual opinions and methods of treatment that exist, in respect to individual cases and various classes of disorders, indicate a highly inaccurate system of practice. Some allowance, of course, must be made for individual capacity and skill, but it would seem as though a greater degree of standardization in medical practice could be developed than

now exists, at least in the simpler office and bedside procedures. There is too much vagueness, too much lack of agreement, in the treatment of even such minor matters as an infected wound, a cold in the head, acute indigestion, eczema, infant feeding, etc.

The relation of the psychic and subconscious reflexes to physical disorders has always been recognized, but frequently ignored. The remarkable results obtained now and then, purely by accident, with mental healing suggest the possibility that the future development of our knowledge of these forces may bring about great changes in methods of practice.

As we reflect on the problems we are daily confronted with in our effort to limit the ravages of disease, and remind ourselves of how each advance in our knowledge opens new and greater problems, we realize with deep humility the significance of the words of the immortal Newton when he said, toward the end of his career, "It seems that I have been but as a child playing on the sea-shore, now finding some pebble rather more polished and now some shell rather more agreeably variegated than another, while the immense ocean of truth extended itself unexplored before me."

123 Wisconsin Ave.

THE ART OF MEDICINE AND MECHANICAL TREATMENT

When the public learns to select a physician for his broad intelligence, rather than for the mechanical equipment in his office; when the people will depend on what the doctor has learned rather than on what they read in the newspapers; when the doctors themselves use their judgment more than their machinery, then shall we attain a proper balance between the art and the mechanics of medicine and rise to a height where we shall surpass all other countries in the care of our sick.—DR. G. F. CHANDLER of I...gston, N. Y., in M. J. and Record, Jan. 1, 1930.

MEDICAL SERVICE

The man who conserves his time, who so organizes his practice that he is the giver of medical service and not just a medical servant, and who turns this commodity, time, into compensation that will allow him to stand as a representative of his community—this type of man contributes the most credit to his profession. It is discreditable for a physician or surgeon to be unbusinesslike with the public.—DR. E. J. CLEMONS, Los Angeles, in Med. Economics, Dec., 1929.

THE SEMINAR

CONDUCTED BY

MAX THOREK, M.D. (Surgery)
GEORGE B. LAKE, M.D. (Medicine)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.

Discussions should reach this office *not later* than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 5 (MEDICAL)

Submitted by Dr. A. S. Dunton, Paris, Ont., Can.

Recapitulation: The patient is a man, 20 years old. He had scarlet fever ten years ago, followed by diphtheria, but appeared to make a good recovery. Later he had a tonsillectomy.

He first complained of puffiness of the eyelids and blurred vision, followed by violent fronto-occipital headache and nocturia, with sediment and some blood in the urine. Later he had dizzy spells.

Examination: The salient features of the examination were: Multiple retinal hemorrhages and choked discs; heart enlarged and pulsations violent; blood pressure, 220/170; urine red and cloudy, with 75 percent albumin (by volume), numerous erythrocytes and a few casts; blood, non-protein nitrogen, 45 mgm. per 100 cc.

After three weeks the blood disappeared from his urine, and the specific gravity, which was, for some time, fixed at 1.010, rose to 1.026. The albumin was reduced to a trace, with occasional hyaline casts. The blood pressure, after three weeks, slowly fell to 160/110.

Requirement: (1) Diagnosis; (2) If the patient recovers, how long should he be

kept from work and what should be done about the hypertension?

DISCUSSION BY DR. EMIL C. JUNGER, SOLDIER, IA.

There is no doubt that this young man has a rather acute exacerbation of a chronic nephritis, and the picture looks rather discouraging as to recovery, because of the secondary vascular changes.

This patient might improve for a while under strict elimination, with rest and a milk and fruit diet. If this treatment is not successful uremia will develop and take this man off.

DISCUSSION BY DR. RAOUL L. VIORAN, AKRON, OHIO

The case so ably described by Dr. Dunton, appears to be one of *chronic interstitial nephritis*. All symptoms given make for a simple diagnosis.

The prognosis, from the facts given and in view of the patient's age, is favorable.

Treatment may be outlined as follows: A quiet mode of living; equable climate; the patient should be made a "life-member" of the "Dry-League;" the bowels should be kept open by calomel and salines; the amount of water ingested in 24 hours should be limited to a maximum of 2,000 cc.; a nutritious, easily digested, moderate diet, with restricted proteids; abstention from strenuous physical exercises.

Medicinally the symptoms should be treated as they may arise: The high blood pressure, so common in this condition, may be combatted by 5 to 10 drops (0.32 to 0.65 cc.) of a 1-percent solution of nitroglycerin, three times daily, or by nitrite of sodium, 0.10 to 0.20 Gm., three times a day; the anemia, if present, should be treated with iron, in the form of tincture

of ferric chloride, 5 to 10 drops (0.32 to 0.65 cc.) to the dose. Cardiac dilatation, with an arrhythmic, galloping pulse, would require digitalis.

The term "recovery" is a relative one. No one could venture to predetermine as to when the patient should resume work, better than Dr. Dunton.

DISCUSSION BY DR. DIETRICH KLEMPNER,
CHICAGO

The diagnosis in this case is *acute nephritis*. The hematuria, hypertension and azotemia mark it as *glomerulonephritis*.

There are various prognostic possibilities. An acute course with fatal termination (within two months) will not apply to this case. Perfect recovery is possible. The severity of the early signs and symptoms bears no relation to prognosis. And when a case of glomerulonephritis heals clinically, it remains healed.

This case shows a favorable clinical course: Puffiness and hematuria have disappeared; of albumen, only a trace is left; the blood pressure has dropped considerably, though the diastolic is still 110; the kidneys have regained their function of concentrating the urine. A favorable outcome is probable if the diastolic pressure shortly comes down to normal. If hypertension and albuminuria persist, the course becomes chronic and unfavorable, death usually resulting within one to twenty years.

Treatment: The patient is to be kept warm and at rest. Active purgation and sweating are not desirable in the presence of the secondary anemia.

Diet: The acute stage having passed, a liberal protein diet should be tried, controlled by blood chemistry studies. The kidneys concentrate the urine fairly well and we may, at this stage, expect a fair elimination of nitrogenous waste. Protein feeding, if tolerated, is the most efficient remedy for the anemia. Water may be given freely. Of salt, for empirical reasons, only a very limited amount. Starches are fed liberally and fats less so, because of a cholesterinemia that is usually present.

The only drug that seems indicated is iron, and the dose should be small, as it irritates the kidneys.

The patient should be kept at rest until the blood and blood pressure come within normal figures, or until the facts of the chronicity of the case is established, when he may be given more freedom.

The hypertension is secondary to the nephritis in this case and demands, for the time being, no special treatment.

This patient with a glomerulonephritis of unknown etiology would probably benefit by a change to an equable, warm climate.

DISCUSSION BY DR. LEO C. DU BOIS,
CHICAGO

Headaches, blurred vision, pallor, emaciation, blood pressure 220/170, pulse pressure 50, overacting heart, spell toxemia.

Choked discs, hemorrhages in the retina and the urinary findings, spell acute, hemorrhagic nephritis.

The combination indicates an acute, hemorrhagic nephritis of toxic origin.

Cause: First, a Wassermann test is indicated. Syphilis will give this exact picture.

Second: Check the tenderness on deep pressure in the right costovertebral angle. It may indicate an acute pyelitis, pyelonephritis or perinephritic abscess, any one of which can cause absorptive toxic symptoms.

Treatment: First, find the focus of absorption and eliminate it, while giving routine treatment of the acute nephritis (rest in bed, hot packs, elimination, diet, etc.).

Second, if syphilis is present, give Colloidal Mercury Sulphide (Hille), starting with 1 cc. intramuscularly, three times a week (in spite of the nephritic symptoms), in combination with iodides. Arsphenamines given at this time will, in all probability, kill the patient. I have seen cases of this type go on to complete recovery with the combination of treatment indicated.

Third, if the cause be an infection of the right kidney, local treatment, operative if necessary, may be undertaken when the acute symptoms have subsided.

The blood pressure will care for itself, once the cause is removed.

Properly treated, the prognosis should be good, but prompt and intelligent treatment is very essential.

DISCUSSION BY DR. J. S. LANKFORD,
SAN ANTONIO, TEX

The scarlet fever, ten years ago, left the kidneys impaired, and this disease was followed by diphtheria, which emphasized the scarlatinal sequel. The kidneys never recovered and there has been trouble there ever since, with perhaps impaired function,

as would have been shown by the phenol-sulphonephthalein efficiency, even though there may not have been albuminuria or other suggestive findings. Some infection from the tonsils, probably with repeated colds, added to the original lesions, has been holding over constantly. No doubt the urinary specific gravity was low and there may have been some kidney retention.

The patient has felt fairly well until the last few weeks. Recently he has suffered much with headache and has been dizzy; his eyes are puffy; there is a sediment in the urine and sometimes blood.

It may be safely assumed that, in his occupation, he has been confined in a well-heated room, but exposed to icy winds in passing back and forth. In his occupation that would be expected. On account of the exposure, and possibly some overeating and other intemperance, he developed acute nephritis, somewhat hemorrhagic, based upon the old condition. This state was complicated by albuminuric retinitis. The headache in the frontal and occipital regions was toxic. This would explain also the dizzy spells. The complexion and the condition of the skin (dry and harsh to the touch) indicate acute nephritis. Blurring of the vision is, of course, due to retinitis. The pulsation of the precordia and in the vessels of the neck shows an important condition of cardio-renal disease with high blood pressure. The chemical and microscopic urine findings are characteristic.

There is, in nearly every instance, more or less reduction of the red cells in nephritis, and where it is chronic it is almost like pernicious anemia. The specific gravity of 1.010 was quite suggestive; but now, with 1.026, the outlook is better.

Some albumin is not so important; the great thing is microscopic indications of destructive changes, with the blood pressure high and functions poor. We have here no statement of the phthalein efficiency, which is extremely important. The presumption is that it was low.

Prognosis: Everything is possible, with a boy or young man, with the heart and kidneys. This acute inflammation will probably subside, in part at least, within a few weeks or months, with a reduction of the blood pressure to a more reasonable point and with better function and a better condition of the blood.

Disregard the hypertension; or rather,

see to it that the functions are as well performed as possible, and certainly use no means of reduction, other than the proper function of all organs and suitable rest, with attention to the diet. Many patients are seriously hurt by the use of nitrites, which reduce the systolic pressure at the expense of heart strength and power and leave the diastolic high, with increased toxemia.

Almost anything is possible in the future of a young patient of this kind, if he lives correctly. Otherwise the outlook is not good. Imprudent eating, worry, physical hardships, or exposure to cold winds might bring back the trouble. His kidneys are permanently impaired, but he may live a long time if he lives in the right way. Small doses of thyroid substance (one tenth grain (6.4 mgm.), three times a day) will promote recovery.

ADDITIONAL DATA BY DR. DUNTON

The patient was discharged from hospital on May 25, having gained weight; vision having cleared remarkably; complaining of no headaches, dizziness nor gastric symptoms. Blood pressure, 180/135.

For several weeks he remained in bed until noon and felt very well; had no headaches nor dizziness; had a good appetite and digestion; and gained 5 pounds in weight. He could see well enough to read for a short interval, while at one time during his illness he could not distinguish color nor objects four feet away. His blood pressure on June 14, was: systolic 210; diastolic 150.

The treatment during his stay in the hospital, consisted of absolute rest in bed, with diaphoresis by means of sweats; tincture of digitalis, 10 minims (0.65 cc.) t.i.d. (discontinued shortly on account of nausea) and calcium chloride, 15 grains (1.0 Gm.) t.i.d., by mouth. This drug also caused nausea and was discontinued after 10 days. Proteins in the diet were restricted to the basal requirement—about 40 Grams.

Late in June he began to take sodium sulphocyanate, to reduce his blood pressure, but it did not do so and caused nausea, so it was stopped. The pressure, on July 5, was 230/160.

On July 11, he had pain in the epigastrium and severe headache and was readmitted to the hospital, where his blood pressure was found to be 230/160; the cardiac apex

beat was 11 cm. to the left of the mid-sternal line; urine, brownish-red, with albumin 25 percent, by volume.

The administration of Calcilact was begun at this time, but it, too, caused nausea and, on July 15, the dose was reduced 50 percent, his blood pressure being then 230/180.

On July 22 he felt better, though both optic discs were choked and his vision was blurred. On the 26th his urine was smoky, but contained no macroscopic blood, and his blood pressure was reduced to 220/150.

On August 2 he collapsed. His heart was dilated (apex beat to left of nipple) and his systolic pressure fell to 140. He recovered after the use of stimulants.

During the next two weeks his cardiac dilatation increased somewhat; his abdomen became markedly distended, with veins showing on its surface; his legs became edematous; and dullness and moist rales were present over the lower lobes of both lungs. The edema was largely relieved by Diuretin, 10 grains (0.65 Gm.) and caffeine-sodium benzoate, $\frac{1}{2}$ grain (32 mgm.), given three times a day. His urine showed a specific gravity of 1.002 and a trace of albumin.

On August 11, his heart showed a rough, presystolic bruit in the mitral area; a soft, blowing, mitral systolic murmur, transmitted to the axilla; harsh aortic first sound; and a palpable presystolic thrill over the precordium. He was practically blind.

On the night of August 17, he passed a large, bloody stool, with clots, and four or five such stools were passed during the next day. On the 19th there was a copious hemorrhage from the bowel in the morning and the patient died at 11:40 A.M. No autopsy was obtained.

The clinical diagnosis was acute, hemorrhagic nephritis, with hypertension.

CLOSING DISCUSSION BY DR. GEORGE B. LAKE, CHICAGO

This interesting case is a rather typical picture of severe nephritis, probably of more than one type, though showing symptoms chiefly of the glomerular variety, as suggested by Dr. Klempner.

The history is characteristic—three infections (scarlatina, diphtheria and tonsillitis), followed, after a few years and before the age of thirty, by a breakdown of the kidneys.

While the symptoms presented in the problem were decidedly acute, I am in-

clined to agree with Dr. Junger and Dr. Lankford that they represented an exacerbation of a chronic process which had been going on for some time, as the extreme and persistent hypertension and choked optic discs are late signs of chronic vascular nephritis, rather than of a primary acute process. Adolescent boys are not apt to worry over nor call attention to minor ill feelings, and it seems probable that this patient's kidneys had been impaired for several years before the crashing headaches, blurred vision and vertigo brought him to Dr. Dunton.

All of the signs and symptoms presented in the problem—retinal hemorrhages and papilledema, heart findings, hypertension, and anemia of secondary type—are parts of the same general picture and require no special treatment, apart from that of the nephritis. The severe hematuria and slight early edema point to glomerular, rather than tubular involvement.

The possibility of syphilis should always be kept in mind and, had it been demonstrable in this case, the management suggested by Dr. Du Bois would have been entirely correct. I believe, however, that there is enough etiologic background here without considering syphilis as a factor.

On the data given in the problem, my prognosis would have been less favorable than that of all the other discussants except Dr. Junger, who saw, as I see, underlying the severe, acute symptoms, the probability of an old, chronic process which might well have crippled the cardiovascular-renal system beyond hope of repair.

I can add little in the matter of treatment, as all have emphasized the necessity for relieving the staggering kidneys of work by stimulating the other emunctories and by a bland diet and rest. One point, however, seems worthy of emphasis. In less-far-advanced cases of nephritis, ootherapy with kidney substance, marketed under the name of Nephritin, has been reported as giving good results in a considerable number of cases and appears to be worth trying.

The time when a nephritic patient can safely resume work, and the kind of work he can safely do, must be determined by the physician who is watching him from day to day, and by none other.

The additional data supplied by Dr. Dunton confirm the gloomy prognosis. After a few months of amelioration of the patient's symptoms, under the doctor's

treatment, the whole nephro-circulatory apparatus fell in ruins—the heart gave way under the high pressure and presented a perfect museum of abnormal sounds, while the lungs and other parts filled up with edema, the ascitic fluid in the belly causing sufficient pressure on the inferior vena cava to account for the tortuous veins on the abdominal wall.

The terminal event—profuse intestinal hemorrhages—while rather rare, is of sufficiently frequent occurrence to be specifically mentioned, in "Nelson's Loose-Leaf Medicine," as a possible complication of chronic nephritis.

It is decidedly too bad that an autopsy was not had on this case, as the organs would have furnished a highly instructive collection of pathologic specimens.

PROBLEM NO. 7 (MEDICAL)

Submitted by Dr. J. S. Lankford, San Antonio, Tex.

The patient is a male; single; age, 55; height, 5 ft. 11 in.; weight, 150 lbs.; traveling salesman.

Family History: Nothing important elicited.

Complaint: Constant headache, of a most distressing character, about the eyes, in the temples, over the left side of the head and down left side of the neck, with tenderness. Dry mouth; much thirst; very heavy and continuous sweating.

Personal History: His hair nearly all fell out at about the age of seven. No infectious diseases during the growing years. Has had pyorrhea of a rather serious character for a number of years. No other focal infection. Troubled with indigestion (gaseous), but no constipation. Has smoked cigars excessively, but never drank. For a number of years he has been under very heavy business strain, travelling and supervising large affairs. No known syphilitic history.

He has generally enjoyed very good health until six months ago, when he began to suffer with headache, as described. He drinks forty or fifty glasses of water a day and passes it nearly altogether through the

skin. His health is not greatly impaired, but he is extremely nervous and has lost forty-five pounds in weight in six months.

General Appearance: Nutrition, only fair; muscles, flabby; some pallor; appears nervous, anxious, suffering.

Skin: Very moist—wet, in fact—and extremely smooth; dermographia noticeable; no thyroid enlargement nor any of the eye signs of hyperthyroidism; basal metabolism test, not made.

Cardiovascular System: Cardiovascular sclerosis, well marked; visible, throbbing arteries in the arms; left temporal vessels distended; moderate hypertrophy of the heart, with sounds somewhat muffled; a rough, blowing murmur, systolic in time, is heard best at the apex, and is transmitted to the aortic region; systolic, vascular murmurs are heard in the neck on both sides; a very slight aortic regurgitant murmur is heard with much difficulty in the fourth interspace on the left; blood pressure, 170/70 (this was confirmed by the sphygmotonomogram); pulse, 90; respiration, 17; temperature, 97°F.

Kidneys: Specific gravity of urine, 1.020 to 30; a trace of indican, persistent; a trace of sugar in one of half a dozen specimens; Karo test produces 3 percent sugar; microscopically negative; phthalein efficiency, 75 percent.

Gastrointestinal System: Tongue bare in spots; some indigestion, with gas throughout the ileum and colon; moderate increase in liver area; no tenderness.

Blood: Hæmoglobin, 60 percent; leukocytes, 4,200; red cells, 4,760,000; lymphocytes, 57 percent; Wassermann test, negative.

Nervous System: The patient is excitable and somewhat hurried in his movements. Arm reflexes, dull; epigastric and umbilical reflexes, very dull; cremasteric and knee reflexes, lost; heat and pain sensation in feet and ankles, diminished; soles of the feet, insensitive.

Skull: X-ray pictures of sella turcica and brain, normal.

Requirement: Suggest diagnosis and treatment.



THE CLINIC

PEDIATRICS

Intussusception*

By H. WILLIAM ELGHAMMER, M.D., Chicago

Asst. Clin. Prof. Pediatrics, Loyola Univ. School of Med.

INTUSSUSCEPTION is a rather common occurrence in children. I am reporting this case particularly for its diagnostic importance.

This child was four months old; normal birth; normal feeding—a healthy baby girl.

On Wednesday night, January 15th, 1930, the baby was fed at 6:00 o'clock and put to bed; woke up at 9:00 and had a large bowel movement, normal in character and without pain. She was returned to bed and seemed to settle down. Shortly afterward she woke up and had a crying spell, the worst she had ever had. The nurse picked her up, but could not quiet her. She screamed for a while to vomit, suddenly turning limp and very pale, and then went to sleep, waking up occasionally with a little whining cry. At 11:30 she had another screaming spell, and the mother was about to give her an enema when she had another bowel movement, containing mucus and blood.

I saw the child about a half-hour later. She was the picture of a normal baby; no pain; color good. The history was typical, however—a large bowel movement; sudden pain; shock, followed by the passage of mucus and blood. I found a typical, sausage-shaped tumor, located to the left of the umbilicus. The cecum was empty.

She was brought to the hospital and operated upon about 1:45 A.M. Upon opening the abdomen, we found the intus-

susception located in the upper left quadrant. Apparently it was about five hours old. It was reduced carefully. The cecum was congested; the appendix normal. The operation required about twenty-two minutes.

On Thursday morning the temperature was 103°F., and she vomited all day, typical prune-juice blood. She also passed gas and dark blood by rectum. I washed out the stomach and evacuated some bright blood, which disturbed me. We stopped everything by mouth. At nine that evening we started water by mouth and, from that time on, recovery was uneventful. I saw her yesterday and she is perfectly normal.

COMMENTS

These accidental conditions are almost typical. The average age of the patient is from four to eight months; and the onset is very sudden. The climbing action of the child is characteristic. When you attempt to cuddle it, to quiet the screaming, it starts to climb. Shock is also typical. The preceding large bowel movement is often seen, suggesting an unusually forceful peristaltic wave. Vomiting may or may not occur, depending upon the location.

For diagnosis, we can say that two of three things are necessary: The typical onset; passing of blood; and finding the tumor. The passage of the blood might not be seen until later, but may be demonstrated by the use of a suppository. Do not use an enema. If you feel around the

*Presented at a clinical meeting, South Shore Hospital, Chicago, Jan. 29, 1930.

cecum, you will find it empty; travel up about the course of colon and you find the tumor. The time element is important.

The prognosis depends upon the location of the tumor—the closer to the sigmoid, the more severe. Immediate operation is the only treatment. If operated upon within six or twelve hours, the mortality is practically nil. I have had fifteen cases and have lost one.

As to the events after operation, this baby's progress was stormy. She should not have vomited blood. When I washed out the stomach I injured the mucosa with the catheter. There was no free bleeding in the stomach at the time.

The reduction of the intussusception is accomplished fairly simply. Instead of putting traction on the upper end, I use a milking action on the lower end, trying to force one end back, then it will unfold itself. As a rule the appendix has been pressed upon.

The question of removing the appendix is doubtful, since it increases the mortality 50 percent. The appendix may look very bad, but will return to normal when circulation is reestablished. The intestine is covered with Jackson's membrane, and a certain amount of cell infiltration is present. Rarely does the invagination recur.

DISCUSSION

Dr. Weller Van Hook: The operative reduction of an intussusception is rather easy, as a rule. Patients usually recover very quickly after operation, if done early enough. If left too long, gangrene sets in and death takes place from perforation of the intussusception.

A rare case, in a girl six or seven years old, simulating intussusception, came under my observation. We opened the abdomen, about twenty-four hours after it occurred, by right rectus incision, and found in the abdomen a mass, and over the large bowel was the tip of the appendix, from which pus was issuing. We pushed further, and pushed out the cecum with the appendix, which we removed. Then we pushed out the cecum with the colon. It was a rectal-colonic hernia, with the appendix in the cecum.

Dr. Guy S. Van Alstyne: Diverticulum is one cause of intussusception. It will intussuscept into the ileum; then the ileum into the cecum. This one was exactly at the cecum.

Polyps in the submucosa, hanging free in the bowel, could, along with peristalsis, perhaps have something to do with it. I think we often operate without finding the etiologic factor. One might find a polyp or a cyst.

Dr. Elghammer spoke of vomiting blood. A boy of twelve vomited blood profusely and had no blood in the stool. He had a colicky abdominal pain, and more than one normal bowel movement. I saw him about noon, and he had no elevation of temperature and no pain. He appeared normal. I gave instructions as to what to watch for. I heard nothing more until the following evening, when there was a history of recurrence of acute abdominal pain and vomiting of blood twice. He had a temperature of 100°, but no blood in the colon.

On operation we found a double intussusception of the ileum, far away from the cecum. One loop had invaginated and reinvaginated. I have had no luck with late cases. Every case with gangrene of the bowel, where I had to resect, died.

Rectal examination should always be made, even when the patient is an infant. The abdominal wall is not rigid, and one can palpate rather well. The mass is ordinarily immediately under the right lower rib. We had one case which was rather late and, on rectal examination, the finger came in contact with a large mass. The whole ileum was gangrenous.

I have never taken out the appendix, even though it may look decidedly bad. Two, three or five minutes may make a good deal of difference, in the result, and I believe in doing just the necessary thing and getting out.

There are sometimes postoperative recurrences, and a small percentage of these cases come to operation, though many reduce spontaneously. If I can fix the ileum up along the cecum, with two or three stitches, I feel safer, for then one knows it will not come back.

Dr. Clarence S. Dunner: Have they stopped the enema treatment entirely?

Dr. Elghammer: There is a school in Europe which uses enemas; but one has no way of telling what one is doing—one cannot watch the case. Gangrene might occur and the baby would die.

Surgery is absolutely indicated. The mortality is low. The etiology is not un-

derstood. We have the ascending terminal or post mortem intussusceptions; but these acute cases are all descending.

The history of the onset of these idiopathic intussusceptions, occurring in the first year of life, seem to form an entity which, to my mind, is such a clear-cut picture that, in the ones I have collected in eight years, all but three were diagnosed previous to seeing the child. It is a very definite clinical picture.

Very few of us are experienced in doing a rectal examination on a baby girl; and, incidentally, intussusceptions are more common in boys. In examining one baby girl, I ran into a mass half an inch inside the rectum. There was no mass in the abdomen, and I was quite puzzled until I found I was palpating the uterus.

If one sees the cases late one finds the toxic effects—the picture of peritonitis. There is no reason for this early, as the condition is then purely mechanical. Some time the child looks so well that it seems a shame to bring it to the hospital for operation. I remember one case which I saw at eleven o'clock, and the child was playing with her doll. It took me one hour to convince the family that the baby would die if she was not operated upon.

Dr. Martin H. Merbitz: It is sometimes difficult to feel the tumor. The child is generally fussy. I have had the mother hold the baby in a standing position, so that I could palpate the abdomen.

Dr. Elghammer: Temperature elevation does not belong in the early picture; that comes later. There are no laboratory find-

ings. If vomiting can be produced, I do so. If these patients have nothing in the intestinal tract, and you give them water, they will vomit.

Dr. Bailey: We saw a child four years old, with complaint of pain in the stomach for about a week. Examination was negative, and we advised a light diet and rest in bed. She was apparently all right, but complained of pain after eating. The leukocyte count was rather high, with a high polymorphonuclear percentage. A second examination showed a distinct mass in the region of the cecum, not large. I made a tentative diagnosis of appendicitis, with a walled-off abscess. We called Dr. Black in consultation, and his opinion was that it was a surgical case.

On operation we found a small invagination of the cecum, about an inch and a half—not enough to cause complete obstruction. There was a perforation, with abscess formation around it. I closed that up, took out the appendix and the patient made a good recovery. There was a perforation within the small bowel.

Dr. Elghammer: We had a six year old child with partial intussusception. She had been ill for three days when I saw her, and had been under the care of a pediatrician. When I was called in there was a definite mass in the cecum. She was operated upon and the partial intussusception found, with no gangrene, so it was reduced and dropped back. These cases are due to some disease condition and are different from the idiopathic intussusceptions in early life.

THE MEDICINE OF THE FUTURE

The medicine of the future will view disease only as the inevitable clash between two sets of forces. The physician of the future will be called upon by an intelligent public to investigate, not only the outlying armies of universal violence, but also the innermost recesses of that defensive fortress which is the patient's total personality.—DR. GEORGE DRAPER, in "Disease and the Man."

CLINICAL NOTES AND PRACTICAL SUGGESTIONS

Sir James Mackenzie on the Future of Medicine

THAT great and wise man and profound student of human beings, Sir James Mackenzie, among his other important writings, discussed the future of Medicine in a small book bearing that title and published in 1919.*

Although eleven years have elapsed since those words were penned, the situation has changed so little that they are as pertinent today as they were at the moment of writing, and many of the points are so well and so strongly stated that no discussion of the future of Medicine can be quite complete without quoting this celebrated cardiologist and all-around physician.

I have, accordingly, selected a number of paragraphs from Part I of this book for reproduction here, in the hope that they may give inspiration to and stimulate constructive thought in many who may never have seen the volume from which they are taken.

The chief aim towards which all endeavors should be bent, in medicine, is the prevention and cure of disease. Disease is rarely recognized until it has impaired the health of the individual, and produced suffering; and the concentration of attention to this stage has diverted attention from the preceding stages.

The importance of pathology is now so universally recognized, that everywhere facilities are given for its prosecution, so that it can be said, that ample provision has been made for the study of the disease, after it has killed its victim.

If we seek to find out, "What are the facilities offered for the detection and cure of disease in the stage when it has not damaged the tissues?"

we discover that there is little consideration given to this aspect of the matter. It is indeed instructive to reflect that, while men undergo a long and special training to enable them to recognize the appearance of disease after the patient has died, and other men undergo equally careful training to enable them to recognize disease after it has damaged the tissues, few or no attempts are made to train men for the detection of the disease when there is hope of cure.

If we do not know the early signs of disease, there is little hope of our achieving the aim of medicine—the prevention of disease.

The next step is to recognize that, if progress cannot be carried further with our present conceptions and methods, we must look out for a new concept, as well as new methods.

The early stages of diseases are, as a rule, insidious, and are indicated mainly by subjective sensations. The patient becoming conscious that there is something amiss with him, does not, as a rule, seek help from the hospital physician, but from his family doctor. The bulk of patients, in the early stage of disease, are never seen by those who are systematically engaged in its investigation.

If then, to achieve the aim of medicine, it is necessary to recognize disease, and understand all the phases of its life history, it is evident that only one class of individuals has the opportunity for acquiring this knowledge, and he is the general practitioner. He is the only individual who has the opportunity for finding out the significance of the various signs, a knowledge which is absolutely essential to the investigation of disease, as well as to the rational practice of medicine. His opportunities give him a far wider outlook upon disease than any other members of the profession, however experienced in special branches. The need for someone with a broad outlook is imperative, as the modern tendency towards specialization restricts all investigators and teachers to a narrow sphere of experience.

To sum up, the progress of medicine is being hampered by an imperfect conception of the aims of medicine, and a consequent employment of methods that fail to advance the

*"The Future of Medicine," by Sir James Mackenzie, F.R.S., M.D., F.R.C.P., etc. London, Henry Frowde and Hodder and Stoughton, 20 Warwick Square, E.C.4; 1919.

subject. So far, the greatest endeavors have been spent in elucidating the later stages of disease, and progress demands that the predisposing and early stages should be investigated with equal thoroughness and energy. In order to do this other fields must be explored, other methods used, and other individuals employed, than have served the purpose of investigation and teaching in the past.

If the teacher, for five minutes before the end of his lecture, gave an outline of the subject of the morrow's lecture, and told the student in what books to find the matter, the student would next day come prepared to appreciate the lecture and to understand the demonstrations, and to note when the teacher had supplemented the text-book by new material.

The vast majority of students who enter on the study of medicine ultimately become general practitioners, and yet a student may pass through his curriculum and be instructed for years by a large number of teachers, not one of whom has had any experiences of the life he is to lead as a general practitioner. As a result, a large portion of the student's time and energy has been spent in acquiring information that is of no use to him in the practice of his profession, while much of the knowledge which he often finds essential has never been given to him.

The general practitioner who has experienced and suffered from a defective education is never consulted in educational matters.

Necessary subjects should be taught with the definite perception of their relation to the practice of medicine.

At the present time it is hopeless to expect in any school of medicine that the student will acquire a sensible understanding of pharmacology and therapeutics.

What is the remedy for this state of affairs? It is that no remedy be prescribed in the hospital unless the teacher who prescribes can demonstrate to the student its reaction on the human body. Each time a drug is given the teacher must give the reason for presenting it, and the student must be set to watch for the effects it is supposed to produce. Such a practice would have a most beneficial effect upon the progress of medicine.

I have visited hospitals and medical schools in many countries. I have had shown to me with pride splendid pathological institutes, excellent wards with laboratories attached, replete with all kinds of mechanical devices and presided over by competent men who have demonstrated to me a great variety of apparatus for detecting some phases of disease; but I have never yet been asked to see an out-patient department, nor shown any place where attempts to study the symptoms of disease, in its early stages, were being carried on.

There is an opinion widely current in educational quarters, that the teaching of medicine has become of late years more "scientific," and that the student when he qualifies is a more scientific doctor than he was 30 or 40 years ago. Much as it may surprise people, this opinion is unjustified.

The chief defect is in fact that there is no teacher with a broad outlook on medicine—one who can see all the different branches in their proper perspective.

I can say with conviction that the best clinicians that it has been my good fortune to meet, and who inspired me with the greatest interest in clinical work, were those professors whose sanity of judgment, coupled with a profound knowledge of allied subjects, gave me a far wider outlook than the teachers of to-day are capable of doing.

It should be recognized that the specialist begins his contribution to medicine after the disease has damaged the body and provided a physical sign. The question arises, how was the physical sign produced? This simple matter is of the essence of medicine, particularly in dealing with the early stages of disease; and disease will never be properly understood till this knowledge is acquired.

The manifestations of nature are infinite in their variety and, to the untutored mind, seemingly chaotic, but the fundamental forces producing them are few. A recognition of these forces at once brings the chaos into an orderly arrangement and permits of an easy comprehension of the significance of the manifestations. In other words, the more thorough the knowledge of the laws of nature, the easier it is to understand nature's manifestations. An increase in knowledge of natural laws leads to simplification.

There are problems intimately connected with clinical medicine, yet physicians have no opportunity for studying the pregnant woman. The obstetrician sees her, but no obstetrician has yet learned the elements of cardiac symptomatology sufficiently to enable him to acquire the necessary information.

If we will study these words of an outstanding observer and thinker, we will be able to see where some of our troubles lie and may then, perhaps, be able to apply rational and effective remedies for their cure or amelioration.

G. B. L.

The Doctor of the Future*

IT MAY be admitted that the general practitioner, as now equipped and related to the profession, faces serious and probably increasingly difficult handicaps. He is overshadowed by the prestige of the specialist. He cannot, as an individual, afford the cost of modern equipment and technical resources. In the case of perhaps half of the general practitioners, there is no genuine hospital connection which affords the opportunity for continued education and professional stimulus. The growth of institutional and of preventive medicine is constantly encroaching upon the ordinary fields of curative medicine.

The doctor may take a place for himself as a counsellor of health. Personal hygiene

*Address before the American Child Health Association, Kansas City, 1930, from *Bull. Chicago Med. S.*, Jan. 11, 1930.

will always remain the largest part of a public health program. After the environment has been made sanitary and communicable disease subjected to the maximum control, there will remain the vast field of personal health for which no organized public functionaries can assume responsibility. If the general practitioner will recognize this opportunity, if medical schools will prepare him for the service, if the community will recognize his value in this new relationship, an inspiring career of opportunity and usefulness will open up before him. This will mean, however, a gradual change of attitude, an increasing interest in the normal, a study of the effect upon health of diet, exercise, mental attitudes, recreation, family and social life. All the finest qualities which have made the general practitioner successful in the past may be trained to even greater account in the future.

The medical profession, then, has a heavy responsibility and an inspiring opportunity. Will it recognize the tendencies of today and the demands of tomorrow? Will it take the long view, the socially-conscious attitude? Will it see that the best service must be made available to the great masses of the people, on terms that they can afford to meet; that no medical mechanism can efficiently replace skillful and sympathetic human care and guidance; that prevention of diseases must be more and more a dominant motive; that the general practitioner, if he is to survive, must be readjusted to new times, trained, esteemed, and rewarded as a vital factor in the medicine of the future?

You will rightly reply that the responsibility rests only in part on the medical profession. You will probably ask, "Will family life, schools, colleges, universities, the press, the platform, social standards, public opinion offer an environment in which well-trained, wisely organized and high minded doctors can do their work honestly and efficiently, protected against ignorance, prejudice and fanaticism?" Yes, it is a social problem which involves our whole civilization. To analyze it is not to solve it. We can only hope that clearer vision may kindle imagination and strengthen resolution.

GEORGE E. VINCENT, Ph.D.
President, Rockefeller Foundation.

Metaphen in Undulant Fever

IN THREE recent serious cases of undulant (Malta) fever, or brucellosis, I have seen good results follow intravenous injections of 1:1,000 solution of Metaphen.

A married woman of 30 years was first seen Dec. 1, 1929. She complained of fever and lassitude, so that she could not walk, and was put in hospital. Her blood showed: Hemoglobin, 30 percent; red cells, 900,000; leukocytes, 1,000.

She was given a mild tonic, hypodermic injections of orchic extract and intensive liver feeding; and her blood improved, so that, on Dec. 23, her hemoglobin was 50 percent; red cells, 2,990,000; leukocytes, 5,400. A test for the brucella of undulant fever was reported to be positive.

On Dec. 27 she was given 10 cc. of Metaphen solution, intravenously, and this was repeated on Jan. 4, 6 and 13, 1930. On Jan. 16 she left the hospital, having an almost-normal blood picture. She was feeling and looking entirely well on Mar. 1, 1930, but will, of course, need watching for some time.

The other two patients were sisters, aged 34 and 31 years, respectively. Both reported that they had had some fever every day for twelve years, with annoying diarrhea most of the time and a feeling of exhaustion. Both were slightly anemic. The older sister had a daily rise of temperature (in the afternoon) to 103°, and the younger to 101°F. Both gave a positive test for brucella.

Both were given intravenous injections of acriflavine twice a week for 5 doses, which reduced their temperatures to 100° to 101° and 99° to 100°F., respectively.

The treatment was then changed to intravenous injections of 10 cc. of 1:1,000 Metaphen solution, twice weekly.

After 9 treatments, the elder sister's temperature did not go above 99.6°F., but her blood test was still positive for brucella. Later she had eight more similar injections, since which she still has a fraction of degree of fever daily, but the blood test is now negative.

The younger sister received injections twice a week for 7 doses, after which her blood was negative for brucella and her temperature has been almost constantly normal.

I am of the impression that both acriflavine and Metaphen, given intravenously,

are effective in undulant fever. Metaphen is handier and easier to give (the solution is ready-prepared, in ampules); causes no uncomfortable reactions; and does not cause irritation if some of it escapes into the tissues. My experience with the two drugs is insufficient to enable me to compare their actions intelligently.

These cases should be kept under observation for an extended period of time, in order to be sure that the disease is eradicated.

B. A. ARNOLD, M.D.

Freeport, Ill.

[This report, while not conclusive, is interesting and suggestive. Metaphen seems worthy of a thorough trial in cases of Malta fever.

It would seem, from the sketchy history, that the two sisters are suffering from something besides brucellosis, the picture rather suggesting a mild tuberculous infection or intoxication. In this connection, it might be well to look up the article by Joseph Hollos, in *CLINICAL MEDICINE* for Feb., 1926, p. 84, and also his little book "Tuberculous Intoxications," which was reviewed in *CLIN. MED. & SURG.* for Oct., 1928, p. 781.

We shall be glad to hear more about these sisters.—ED.]

Results of Periodic Health Examination Campaign, New York City

IT IS noted since the intensive campaign to popularize periodic health examinations in New York City, sponsored by the County Medical Society, the various Foundations and Insurance Companies, there is an increase of 38 percent in the number of inquiries from patients on the subject of health examinations, and 25 percent increase in the demands for such examinations. Seventy-eight (78) percent of those replying to the questionnaire felt this intensive campaign was of value; 85 percent were in favor of its continuation.

During the campaign a thousand copies of the New York Academy of Medicine's book on "An Outline of Preventive Medicine" and 1,500,000 leaflets and 21,000 posters were distributed. Fifty-one radio talks, forty-six lectures and seventeen showings of motion picture films, in addition to many newspaper articles, were given.

From this report it would seem that the

campaign conducted last fall was of real benefit to the medical profession as well as to the rest of the population.—From *Bul. Chicago Med. Soc.*, May 3, 1930.

Consultation Requested

Von Jacksch's Anemia (?) Hepatitis(?)

I SHOULD be glad to receive suggestions as to the diagnosis, prognosis and treatment of the following case:

The patient is a negro, female child, ten months old. The family and past history are negative, but we always suspect syphilis in negroes down here.

The present attack came on two weeks ago, with vomiting of yellow bile and slight diarrhea. Fever, reaching about 102° F. in the afternoons, appeared at the end of the first week. The child coughs and frets all the time.

Examination: Child appears anemic; weight 15 pounds; sclerae, greenish-yellow; skin, slightly jaundiced, dry and wrinkled; lungs, clear; heart, slight systolic murmur at apex; liver, markedly enlarged (downward nearly to crest of ilium; left to spleen) but not painful; spleen, the size of an orange. Blood: Hemoglobin, 35 percent; red cells, 1,150,000; leukocytes, 35,000; polys, 84 percent; lymphocytes, 14 percent; occasional nucleated red cells; negative for malarial parasites.

J. PAUL JONES, M.D.

Camden, Ala.

[There scarcely seems to be a good excuse for "suspecting" syphilis. A diagnosis should be made and, if found, appropriate treatment should be given. All of the symptoms may be due to this malady.

The history of the case is not sufficiently complete to make a sound diagnosis upon. A study should be made for rickets; of the stools, for intestinal parasites or their ova and for fat indigestion; the fever and leukocytosis, with a preponderance of polymorphonuclears, suggest an infection somewhere, which should be searched for; the blood should be watched carefully for distorted erythrocytes, as sickle-cell anemia is not very rare in negroes.

The cardiac murmur is possibly hemic in character, due to the high-grade anemia.

The blood picture suggests Von Jacksch's anemia, which is characterized by leukocytosis, a low color index and enlargement of the liver and spleen.

An accurate diagnosis will point to the proper treatment. Rickets calls for viosterol and sunshine; parasites, for anthelmintics; fat indigestion, for a reconstruction of the diet; etc. If the condition is Von Jacksch's anemia, the prognosis is good.

We shall be glad to hear from others who have suggestions to make.—ED.]

Sweating Feet

Sweating feet, though not dangerous, are a condition from which many patients seek relief. The application of tincture of iodine gives most favorable permanent results in this condition and has the advantage of being very cheap. Hardly more than 20 cc. are required.

Sweating feet, without complications, are treated in the following way: The feet are bathed in water of 86° to 104°F., well washed and dried. The macerated places, which are those which secrete most, are painted once or twice, consecutively, with the tincture, until the epidermis is dark-brown. Then boracic acid ointment is rubbed into the skin by gentle pressure. One procedure is usually sufficient to diminish the secretion and the offensive odor, but it can be repeated after ten to twenty days. The result is usually permanent.

In order to keep the skin soft and dry, the boracic acid ointment may be applied once a week. The same salve may be applied to remove excoriations and blisters before using the tincture of iodine, this preparatory treatment usually lasting several days.

EDWARD PODOLSKY, M.D.
Brooklyn, N. Y.

A Law to Promote Pain

REPRESENTATIVE Stephen Porter, of Pennsylvania, has introduced a number of bills at this session of Congress, for the control of the traffic in narcotics. One of the bills, establishing a bureau of narcotics, has already passed the house. A companion measure would forbid even a physician to dispense narcotics unless he was licensed to do so by the federal bureau.

The creation of a bureau of narcotics we regard as a doubtful expedient. The limitation on the right of a doctor to give drugs where he believes they are indicated we regard as something more than inexpedient; it is unsound in principle and is

likely to cause much needless suffering in practice.

The tendency among legislatures is to vote for any measure of narcotic control that the racketeers of the uplift propose. Congressmen fear that a vote against such measures will be regarded as a vote in favor of the dope traffic. They assume from the reading of much superheated propaganda that narcotics are wholly evil and that there is no legitimate use for them. The assumptions are false. Narcotics have caused much suffering to those addicted to their use, but viewed in perspective these drugs are a blessing rather than a curse to mankind. They have blotted out pain which could scarcely have been endured otherwise. They have saved many more lives than they have cost. Every medical school in the country gives careful instruction in the proper use of narcotics and every practitioner knows their habit forming character.

There is little danger in permitting doctors at least their present freedom in prescribing opiates, but there is much danger that additional red tape will mean additional human suffering, which might have been relieved but for the government's interference.—Editorial in *Chicago Tribune*.

Calcium Sulphide

CALCIUM sulphide or "sulphurated lime" is a light gray or yellowish powder with a strong odor of hydrogen sulphide and an unpleasant, alkaline taste. It decomposes readily in moist air, and for that reason, is generally marketed in sugar-coated granules or pills.

The average dose is 1/6 to 1/2 grain (10 to 30 mgm.), repeated every 1/2 to 1 hour until the patient's body is saturated—that is, until the breath and skin have a decided odor of garlic. After that, the time between doses is lengthened to 4, and then to 3 times a day, until the desired results are obtained.

The particular indication for this remedy is suppuration, in any part of the body. It is especially valuable in furunculosis, carbuncles, suppurative middle ear disease, quinsy, smallpox and all other conditions where pus is present. It is also of value in many non-suppurative infections. Whenever used, it must be given to the point of saturation and continued until the lesions

are entirely well; which sometimes means for several months.

I have proved the value of this remedy in hundreds of cases, including recurrent furunculosis, sinusitis, buboes, mumps, pharyngitis and tonsillitis, bronchiectasis and many other conditions. Of course, the patients must be studied carefully and other treatment that is required must be given.

Many new and valuable drugs are appearing all the time and too large a number of physicians lose sight of the older and efficient remedies which have done good service for years. Any open-minded man who will give calcium sulphide a sincere and thorough trial will be convinced of its merits in its special field.

W. T. CRAWFORD, M.D.
Fowler, Calif.

New Ways to Pasteurize Milk in Homes

AN EASY, practicable and convenient method of pasteurizing milk in the home has been perfected in the research laboratories of the State Department of Public Health. The simple equipment necessary includes a quart thermos bottle, a pan, a thermometer and a rubber stopper. The bottle is heated with hot water while the milk is brought to a temperature of 145°F. The milk is then poured into the bottle, the stopper applied, and the bottled milk allowed to stand for an hour. At the end of that time the milk is thoroughly pasteurized and may be cooled and kept for use as desired.

This method of pasteurization, worked out under the direction of Dr. Lloyd Arnold, head of the Chicago branch of the State Diagnostic and Research Laboratories and professor of bacteriology in the Medical College of the University of Illinois, is of great practical value to a large percentage of the population for whom commercially pasteurized milk is unavailable. It places within the easy reach of every housewife and mother a method of insuring for her family, and especially for the children, a safe milk supply.

If it is desired to cool the milk, we have determined that a one-quart mason jar, filled with milk at 145°F. and placed in a large pan of water, can be cooled to 60°F. in thirty minutes.

For the pasteurization of milk, I would suggest that the following equipment be recommended:

- 1.—Quart vacuum bottle (\$1.95).
- 2.—Two-quart enamel pan (\$0.45).
- 3.—Thermometer with rubber protector over—and between 100 to 200°F. (\$0.75).
- 4.—Rubber stopper (\$0.05).

As a tentative suggestion, I would suggest the following routine be recommended for the use of this method for home pasteurization.

- 1.—Boil a pan of water.
- 2.—Scrub vacuum bottle, thermometer and rubber stopper with kitchen cleanser—scrub well.

3.—Fill bottle with hot water. Fill it carefully so it will not break, and then put the rubber stopper in the neck.

- 4.—Do not touch the end of rubber stopper that goes into the neck with your fingers.

5.—Leave the hot water in the bottle for 30 minutes.

6.—Now heat the milk to 145°F. and use the clean thermometer for stirring.

7.—When the milk is heated to 145°F. pour out the water and fill the bottle with the hot milk. Do this quickly.

8.—When the milk has been kept in the bottle for one hour it is safe for drinking. It can be kept in the bottle for 8 hours and still be sweet.—*Illinois Health Messenger*, April 1, 1930.

Dr. Acheson's Case (Myelogenous Leukemia)

IWAS called to see Dr. George Acheson on November 2, 1929. His complaint was general weakness and anorexia.

Examination showed a well developed man, fairly well nourished; color, greyish-yellow; tongue coated; no Hunterian glossitis; gums swollen; pulse 76; heart showed enlargement on percussion and a systolic murmur over apex and base; the aorta seemed widened; the liver enlarged about 8 cm. below the costal margin; spleen easily palpated and enlarged to about four times the normal size; a hard tumor was present on the lower part of the right scapula, and a few large lymph glands on the right side of the neck. Examination of his blood, at this time, showed 2,500,000 reds and 18,000 white cells.

On Nov. 7 he was removed to the City Hospital, where his blood count, taken on

Nov. 9, showed: Red cells, 1,560,000; whites 33,200; hemoglobin, 36 percent; differential count, polymorphoneutrophiles, 30; large lymphocytes 43; mast cells, 6; transitionals, 5; small lymphocytes 16 percent. Personal examination showed the large lymphocytes to be almost entirely myelocytes, promyelocytes and myeloblasts.

The last count, done on Nov. 19, 1929, was as follows: Red cells, 1,754,000; whites 49,000; hemoglobin 35 percent; hyalines 3; transitionals 20; large lymphs 36; small lymphs 2. Personal examination showed that the white cells were largely made up of myelocytes, promyelocytes and myeloblasts. The red cells showed poikilocytosis, with many microcytes and megalocytes and microblasts; polychromatophilic cells were numerous, as were also hypochromatic cells.

The urine was negative, except on two occasions out of eight examinations, when a slight trace of albumin was noted; and several times a few granular casts.

The temperature ranged between normal, in the morning, and 101°F., in the afternoons.

As the condition was considered a case of *splenomyelogenous leukemia*, x-ray treatment of the spleen was instituted. This had no effect. Liver extract, which he had been taking, together with arsenicals, had no effect and these remedies were eventually discontinued.

The patient's condition gradually became worse and he died on Nov. 26, 1929.

Important points of the *post mortem* findings, pathologist's report, were: The heart weighed 375 Gm.; valves were all normal; coronary arteries showed a few atheromatous patches; heart muscle pale, with cloudy swelling; aorta showed yellow patches and a few areas of calcification; Liver very much enlarged, weighing 2,100 Gm., fibrous on section, with numerous areas of fatty change; gall-bladder normal; stomach showed numerous submucosal hemorrhages; spleen very much enlarged, weighing 700 Gm., the pulp somewhat dark in color, on section, and rather soft, with several infarcts; kidneys weighed 140 Gm. each, capsule stripped easily, the whole kidney having an appearance of cloudy swelling.

The small tumor under the right scapula proved to be a fibromyxomatous tumor, attached to the periosteum of the scapula.

Other organs were normal and there was no evidence of malignant disease anywhere.

Post mortem diagnosis: Myelogenous leukemia.

J. A. BAUER, M.D.,
Hamilton, Ont., Can.

[We are glad to be able to present to our readers the solution of the problem of Gen. Acheson's last illness, his case having been presented in the March, 1930, Seminar (p. 207) and discussed in the May Seminar (p. 368). The notice of his death appeared in the April number of CLIN. MED. & SURG., on page 326.

It is interesting to note that neither of the diagnoses suggested (pernicious anemia and carcinoma of the stomach) was correct; but that is not strange when we remember that the blood picture of leukemia was not shown in the Doctor's presentation of his own case.

We are indebted to Dr. Bauer for his excellent solution of this problem—Ed.]

The Transmission of Scarlet Fever

EACH new case of scarlet fever is derived from some previous case of the disease. The scarlet fever germ is present in the discharges from the mouth, nose and throat of the sick. When there is a discharge from the ears, as a result of ear complications, this discharge also may be infectious. This is true of other pus discharges, as from abscesses. The disease is transmitted from those sick with scarlet fever to the well who come in contact with them because these discharges get on the hands or mucous membrane of such persons. The infection is caused by direct contact, as by kissing; or by being sprayed with the infected nose and throat discharges, in the act of coughing, sneezing or talking (droplet infection); or indirectly through various objects, such as drinking cups, candy, apples, pencils, pocket-handkerchiefs, towels, and the like which have been placed in the mouth or infected with the discharges of those sick with scarlet fever.

Scarlet fever can be transmitted from the time of onset until the infectious agent is no longer present in the mucous membranes of the nose and throat or in unnatural discharges, as from a running ear which has appeared as a complication in an attack of the disease.

On account of the difficulty of definitely identifying the germ of scarlet fever, it has thus far not proved feasible to determine the

duration of communicability of the disease by throat culture, as is done in the case of diphtheria. In the majority of instances, it is probable that uncomplicated cases of scarlet fever are no longer infectious in the fourth week of the attack.

The spread of a number of communicable diseases is assisted by the agency of "carriers"—apparently well persons who harbor virulent germs in their bodies. These carriers consist of the "missed cases"; viz., (in the case of scarlet fever) those persons who have suffered from scarlatinal sore throat alone, without recognized eruption; those persons who have not been sick enough to go to bed or, possibly, even complain of their symptoms; and the convalescent "carrier", the child who, after an attack, is allowed to mingle with his playmates too soon, or who continues to harbor the contagion in his nose and throat for a long time after apparent recovery. Such persons play a part in spreading scarlet fever.

There are records of 40 outbreaks of scarlet fever occurring in the United States from 1906 to 1925, in which the infection was conveyed by milk. These outbreaks were usually of an explosive character, an unusual proportion of adults were attacked and the disease was often severe. In every instance the source of the infection was shown to be due to the presence of persons suffering from scarlet fever, either on the dairy farm or among the persons engaged in handling the milk.

U. S. PUBLIC HEALTH SERVICE,
Washington, D. C.



Metaphen in Gonorrhea

ARTICLES appear regularly regarding the treatment of gonorrhea and its complications, but nothing is offered to simplify either the initial or the subsequent medication — and simplicity is conducive to ultimate recovery.

Most, if not all, of the complications of gonorrhea are the result, not of the virulence of the infection, but of mistreatment by the attending physician.

This is attested by the fact that those who have had no treatment whatever usually have an uncomplicated recovery. The simpler the treatment, the better the results, both as regards the prognosis and the susceptibility to the varied complications, occasionally multiple, that frequently ensue.

Instrumentation must be avoided, as this usually tends to aggravate any existing inflammation of the already injured urethra, and predisposes to the most refractory symptoms. Gonorrhea is a self-limited disease, the accumulation of the antibodies gaining the ascendancy over the toxins in six to eighteen months.

For the duration of the acute infection, frequent injections of Metaphen, 1:4000, after voiding, two drams (8 cc.) at each injection, taken at least five times a day, will practically sterilize the urethra. This sterilization occurs about the seventh to the tenth day after the beginning of the Metaphen injections.

Following this, the use of an astringent injection for at least three weeks, five times a day, will result in a positive cure, the continuation of the medication being indicated by the microscopic picture.

Epididymitis, prostatitis, vesiculitis, etc., are all the result of ill-advised irrigation of the urethra and bladder or are the sequelae of some form of instrumentation. The mere fact that the patient has developed an epididymitis suggests that the treatment has been ill-administered or ill-advised.

Despite the recommendations of various remedial preparations for epididymitis, intravenous injections of sodium iodide, fifteen grains (1.0 Gm.) every second day, is the most successful treatment thus far promulgated.

Occasionally the new patient appears with an epididymitis and gives a history of treatment self-administered, with silver protein injections, using a syringe of large capacity. Any syringe used for urethral injection should be limited to a two-dram (8 cc.) volume, sufficient to distend the urethra and force the antiseptic into its crypts and lacunae. Any further pressure, such as that administered with an irrigation apparatus, will force the solution and the infecting agent into the bladder, with unfortunate sequelae.

Using Metaphen, as here suggested, a complete cessation of all symptoms occurs in about two weeks. Infection of the posterior urethra, indicated by extreme frequency and urgency, is due to misapplied injection therapy and requires the use of urinary demulcents and antiseptics.

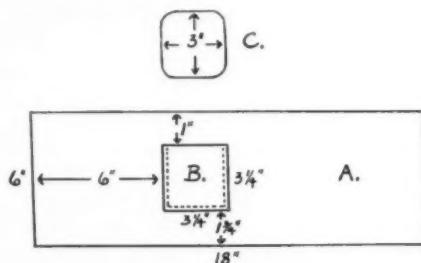
R. STEWART MCARTHUR, M.D.
Los Angeles, Calif.

—
[Evidence is accumulating that Meta-

phen in Oil is even superior to the watery solution, in the treatment of acute gonorrhœa.—ED.]

Truss for Protruding Navel

SO MANY babies have protruding navels, and so unsatisfactory are the various devices used to overcome the condition, that several years ago I adopted the following method:



Take the usual band or strip of canton flannel, six inches wide and eighteen inches long (A). Six inches from one end, sew on a pocket of the same material, three and one-fourth inches square (B). Into this pocket, insert a piece of light sole leather three inches square, with the corners rounded (C). This part of the band is placed over the umbilicus and the band may shift considerably without releasing the flat pressure over the protrusion.

This device does away with adhesive plaster and straps, and the leather may easily be removed and inserted into a clean band pocket at each changing. If the baby is very large, the leather may be a little longer.

So successful has this method proven, that several pediatricians have asked me to present it.

JOSEPH H. SAYER, M.D.,
Seattle, Wash.

Oculist and Optician

BETWEEN the optician and the oculist there is the same difference as between the druggist and the doctor.

A sensible person, when ill, does not ask the druggist to prescribe. The druggist who claims that he can do this better than the physician, only proves that he himself is unreliable.

True, one may ask the druggist to refer him to a doctor and then have him fill the doctor's prescription. In the same manner

the optician should refer patients to an oculist, and the optician afterwards should make the glasses which the oculist prescribes.

The optician should make the lenses according to the oculist's prescription and place them in a suitable frame to maintain their correct position before the eye.

The oculist has given at least four years in study at a medical college and, after a rigid medical examination, has received a State license to practice as a Doctor of Medicine, just as the family physician has. He then must study the eye in every detail, from the treatment of its various diseases to the most delicate operations. He must also correct errors of refraction by the selection of proper lenses to relieve eye strain and other forms of defective vision.

The expert oculist understands the eye thoroughly, in its direct and indirect relationship to other organs of the body, having acquired this knowledge by years of study and actual practice in colleges and hospitals devoted to instruction on the eye.

Let us suppose that one has headaches which seem to result from some condition of the eyes. No one, save the oculist, is really qualified to decide whether or not these symptoms are due to eye strain or eye disease, or whether the eyes are being affected by some morbid condition of other organs.

Gout, rheumatism, anemia, malaria, scrofula, scarlet fever, scurvy, uric acid, measles, diphtheria, diseases of the blood, spine, heart, lungs, spleen or kidneys, and many other diseases may affect the eyes.

Eye strain is sometimes accompanied by such symptoms as spots floating before the sight, headache, dizziness, nausea, vomiting, loss of appetite, insomnia, nervousness, etc. It does not, however, follow that any of these troubles are due to eye strain.

The trained oculist can definitely determine where the trouble lies—if the eye is at fault—and he should be consulted to insure proper and careful treatment.

The "optometrist," socalled, is not legally qualified to diagnose diseases of the eye.—EDWIN M. HARRISON, M.D., Chicago. *Western Med. Times*, Sept., 1923

[This brief and clear summary of a distinction which is by no means universally understood is just as good as it was when it first appeared, and seems worth reprinting.—ED.]

THE LEISURE HOUR

The Exposure of Margaret

(A case of Suspended Development)

HERE has recently appeared, with the erroneous label, "Autobiography," a book of considerable interest to students of personality maladjustments. It is called "My Thirty Years' War," written by Margaret Anderson, whom a few Chicagoans remember as the "beautiful but ineffectual angel" who, some years ago, tried to sell us a periodical called the *Little Review*.

The *Little Review* was not important, nor is Margaret's story of its brief career, except that in telling the story she unwittingly writes an interesting clinical report. While not a case of adult infantilism, as commonly manifested, the analogy is so close as to justify us, perhaps, in calling it a case of prolonged adolescence; for Margaret has matured not the slightest in the decade in which normal individuals mature most rapidly. When twenty years old she came to Chicago from an Indiana village, with all the ebullience and assurance and absence of uncertainty normal to the human animal at that age, entering at once upon her self-selected task of deciding difficult questions and putting things right. The field toward which her generous impulses especially directed her was the field of art and literature.

With no handicap of diffidence and with an attractive exterior (she admits that!), it is not surprising that she made contacts with a large number of prominent personalities in her chosen field. In her book she prints the names and photographs of these personalities and implies that her contacts with them, while at all times chaste, were intimate. Even at the risk of lessening its salability, it should be stated that the book makes no sexual appeal. Indeed, we suspect Margaret of striking out along new lines and trying to sell a book of what may

be called anti-sexual appeal. The sex theme is present in every chapter, but at all times she's "agin' it." On page four she says: "I am no man's wife, no man's delightful mistress, and I will never, never, never be a mother."

Whether the second statement could be made without the qualifying adjective is of clinical interest and two reported incidents throw light on this point. One was the attempt of an elderly patron of the arts to kiss his attractive amanuensis which, we are told, terminated the business relationship. The other was the failure of our well known angel, Otto Kahn, to make good a generous offer of assistance (page 192), the inference being that his interest is not in disembodied art.

That a lack of certain hormones is a factor in Margaret's failure to attain maturity is shown by several signs: There is the exaggerated attention to suggestive topics, along with the exaggerated expressions of repugnance—"Methinks the lady doth protest too much;" There is the childish fondness for occasional naughty gestures and expressions. The entire volume, indeed, is little more than a collection of smart sayings and doings which, in the adolescent, are pleasantly amusing, but after thirty are only grieving to the judicious. This explains why the charming *entrepreneur* could sell her stuff at twenty, but ten years later encountered commercial shipwreck. She was window-displaying what she didn't carry in stock. Her commercial creed advises the use of lip rouge as an aid to salesmanship (page 154) and her photograph (page 1) confirms it, but her ethical creed refutes the implication.

Likewise her book fails to deliver the interesting matter expected from her list of famous acquaintances. There is little of

the famous personalities and much of the pranks, verbal and otherwise, which Margaret and Jane thought best to play upon them. There is much of what is called talk: "Jane and I began talking. We talked for days, months, years." (Page 107) For the samples given, "prattle" would be a more accurate word.

In only one instance does she show up a personality. She publishes some private letters of Ezra Pound, either with or without his consent; if with it, then, poor Ezra! if without it, ditto, ditto.

Margaret's own critical acumen is, unfortunately, fully displayed. She admires Brooke, selects for us his most poetical line—and misquotes it. Victor Hugo is to her a "second rate mind." This phase, of course, does not label Hugo, but quite definitely labels Margaret. She picked it up in Paris, somewhere in the cubist quarter, where it has been in the scrap heap since 1912. The publication of Joyce's "Ulysses" she considers her greatest achievement and the page that most affects her is the one containing the detailed description of an erotic dream.

A complete reading of the book leaves the impression that the author has yielded to a perfectly proper desire to appear in public, but that she has dressed in a hurry and in a poor light. That she will draw a crowd is beyond question and we desire, by this wholly inadequate notice, in some measure to enlarge her audience. But we hope the diagnosis in this case may be one of suspended, not arrested, maturation, and that the author's second appearance, even though undraped, be not untidy.

BURTON HASELTINE

Interesting Analysis

Formula for the music of bagpipes:	
Big flies on windows.....	72%
Cats in the alley.....	11½%
Voices of infant puppies	6%
Hungry pigs in the morning.....	5½%
Steam whistles	3%
Chant of crickets	2%

Look Out Below!

By John Mac Elhinny

A great deal has been written in regard to the modern tendency toward small families. The scarcity of families containing eight or more children is being viewed with

alarm. Of course, most of these critics are men. The women seem to be surprisingly well pleased with small families. Children last longer now than they used to. In the old days a mother wasn't considered a competent authority on the care of children until she had buried five or six out of her 12. Today a few good children are as likely as not, barring accidents, to last a lifetime.

The modern idea is to have a few children and bring them up scientifically. The old idea was to have five or six extra children to cover expected losses. Often the losses didn't occur and then the overhead expense became something terrible. Children of today are so well nourished and cared for that they can almost be guaranteed. The only people who really have a legitimate kick against modern methods are the undertakers. The greatest step forward came when parents decided that doctors were better posted on what and when a baby should eat than was the baby itself.

Healthy children are the most economical. A \$15 doctor is cheaper than a \$75 funeral. If things had kept on as they were going there would have been a terrible housing shortage in the cemeteries. Of course, modern parents are denied the pleasure of contemplating what a comfort and help the departed children would have been to them in their old age. Children used to be a speculation; now they are an investment.—*Brooklyn Eagle*.

Welsh or Something

The oculist was examining the eyes of a patient and had requested him to read the top line of a test card, the letters of which ran H P R T V Z B F H K.

When some moments elapsed, the specialist said: "Do you mean to say you cannot read letters of that size?"

"Oh, I can see the letters all right," replied the patient, "but I can't pronounce the blooming word."—*Pharmacal Advance*.

Nesting Time

The city kid was roaming about in the country when he came upon a dozen or so empty condensed milk cans. Greatly excited, he yelled to his companions: "Hey, fellers, come here quick! I've found a cow's nest!"—*The Doctor*.

To boast of a daily bath is to confess that the habit is new.—*Fountain Inn Tribune* (S. C.).

The Song of the Vitamins

A.

Oh, fine and fat was Ralph the rat
And his eye was a clear, cold gray.
How mournful that he ate less fat
As day succeeded day,
Till he found each cornea daily hornier,
Lacking its Vitamin A.
"I missed my Vitamin A, my dears,"
That rat was heard to say,
"And you'll find your eyes will keratinize
If you miss your Vitamin A."

B.

Now polished rice is extremely nice
At a high suburban tea,
But Arbuthnot Lane remarks with pain
That it lacks all Vitamin B.
And Beriberi is very, very
Hard on the nerves, says he.
"Oh, take your Vitamin B, my dear!"
I heard that surgeon say;
"If I hadn't been fed on whole-meal bread,
I shouldn't be here today."

C.

The scurvy flew through the schooner's crew,
As they sailed the Arctic sea.
They were far from land and their food
was canned,
So they got no Vitamin C.
For, "Devil's the use of orange juice,"
The skipper 'ad said, said he.
They were victualled with pickled pork,
my dear,
Those marines bold and free.
Yet, life's but brief on the best corned beef,
For you don't get Vitamin C.

D.

The epiphyses of Jemima's knees
Were a truly appalling sight,
For the rickets strikes whom it jolly well
likes
If the Vitamin D's not right,
Though its plots we foil with cod-liver oil
Or our ultra-violet light.
So swallow your cod-liver oil, my dears,
And bonnie big babes you'll be,
Though it makes you sick it's a cure for
the rickets
And teeming with Vitamin D.

E.

Now Vitamins D and A, B and C
Will insure that you're happy and strong.
But that's no use; you must reproduce
Or the race won't last for long.
So Vitamin E is the stuff for me
And its praises end my song.
We may double the birth rate yet, my dears,
If we all eat Vitamin E.
We can blast the hopes of Maria Stopes
By taking it with our tea.
—C. H. A., in the *Brit. M. J.*, via *Good Health*, March, 1930.

A Slight Move in a Long Time

Archeologists, digging into ruins of a village that existed 6,000 years ago, recently unearthed a stone tablet depicting one of the ancients milking a cow, but working from the rear with the animal's tail over his head. In 60 centuries, the chief advance made in hand-milking was moving one-fourth of the way around the cow.—*Official Record*, U. S. Dept. of Agriculture.

A Serious Question

"Hello, Sam. What are you drinking these days?"
"I often wonder."

Superfluous Information

The barrister had returned home after an important case in which he had been defending a man charged with murder.

"What was the verdict?" asked his wife, rushing into the hall.

"He was acquitted," beamed the barrister.

"Wonderful. On what grounds?"

"Insanity. I proved that his father had spent five years in a lunatic asylum."

"But he hadn't, had he?"

"Yes," said the barrister, "he was a doctor there, but I saw no need to bring that fact out."—*London Answers*.

Come In—We Have It Inside

Abie Goldblatt and Moses Silberstein had rival dry goods stores at opposite sides of the street. When Abie did anything special, Moses went one better. One day Abie put a fine sign outside his store:

"Mens sana in corpore sano." That didn't faze Moses any; he simply put up another sign: "Men's, Women's and Children's sana in corpore sano at Reduced Prices While They Last."

W. A. B.

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The Breakfast Food Family

Jack Spratt will eat no fat,
Nor will touch he the lean.

He scorns to eat of any meat;
He lives upon Foodine.

But Mrs. Spratt will none of that;
Foodine she cannot eat,
Her special wish is for a dish
Of Expurgated Wheat.

To William Spratt that food is flat
On which his mater dotes.
His favorite feed—his special need—
Is Eata Heapa Oats.

But Sister Lil can't see how Will
Can touch such tasteless food.
As breakfast fare it can't compare,
She says, with Shredded Wood.

Now, none of these Leander please;
He feeds upon Bath Mitts.
While Sister Jane improves her brain
With Cero-Grapo-Grits.

Lycurgus votes for Father's Oats;
Proggine appeals to May;
The junior John subsists upon
Uneeda Bayla Hay.

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Her Family Tree

A lady of very recent social acceptance, visiting in the home of a family whose lineage went back hundreds of years, and desiring to keep up her prestige, remarked:

"My ancestors were all killed in the Wars of the Roses. Indeed for several generations, the family was extinct."—Adapted from *Punch* (London).

Birdless Eggs

A New York vegetarian had an amusing experience the other morning while at breakfast. His family was out of town, and he went to a restaurant and took a seat next to a stranger.

The vegetarian took occasion to advertise his creed by telling the stranger that all meat was injurious and that the human diet should be strictly vegetarian.

"But," replied the stranger, "I seldom eat meat."

"You just ordered eggs," said the vegetarian. "An egg is practically meat, because it eventually becomes a bird."

"The kind of eggs I eat never become birds," answered the stranger quietly.

"Good Heavens!" cried the vegetarian, "what kind of eggs do you eat?"

"Principally boiled eggs," said the stranger.

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Large Numbers

"There goes a man who thinks in terms of millions."

"He doesn't look to me like a great financier."

"He isn't; he's a bacteriologist."—*Pharmaceutical Advance*.

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My Paw

Paw sez a lovely woman sure
Knows how to lure
With Dear-Kiss and Coty's and New Mown
Hay,

And when she uses, as the Frenchmen say,
"Just a soup spoon,"
She sure can stir up love and desire;
But always, pretty soon,
She gets more than she needs,
Usin' it like she was tryin' to put out a
fire—
And generally succeeds.

—B. H.

Thumbnail Therapeutics

Barbituric Hypnotics

The continued use of hypnotics of the barbituric acid series does not, apparently, produce a cumulative effect. When given in small doses (not exceeding 25 percent of a lethal dose), these hypnotics may be continued for years without producing deleterious effect.—Editorial, *J.A.M.A.*, Jan. 4, 1930.

Ephedrine in Allergic Diseases

Ephedrine is the most valuable drug for oral administration that we possess for the symptomatic relief of urticaria and other allergic conditions. Ephedrine hydrochloride is preferable to ephedrine sulphate, as it contains about 5 percent more of the alkaloid.—DR. G. T. BROWN, of Washington, D. C., in *Ann. Intern. Med.*, Dec., 1929.

Endocervicitis

In the recently lacerated and traumatized cervix, local applications of silver nitrate, tincture of iodine, 4-percent mercurochrome and other germicidal agents, together with alkaline vaginal douches, inhibit but often-times fail to prevent the progress of the infection. The cautery works wonders. DR. H. B. MATTHEWS, Brooklyn, in *Am. J. Surg.*, Apr., 1929.

Pregnancy Hints

Vomiting of pregnancy is relieved by a diet high in carbohydrate value. Dextrose solution, 10 Gm., intravenously, at an office visit, yields results more favorable than those from corpus luteum.

Hyperemesis cases demand hospitalization. Dextrose, intravenously and repeatedly, 300 to 1,000 cc. of from 10- to 25-percent solutions, with sedatives by bowel, should be given.

For eclampsia, magnesium sulphate, 20 cc. of a 10-percent solution, given repeatedly, is of marked value in controlling

the convulsions. DR. FLOYD J. LEE, Santa Monica, in *Am. Med.*, June, 1929.

Anesthesia in Tuberculous Patients

It is generally admitted that ether inhalation anesthesia is contraindicated in all known cases of tuberculosis, latent or active. The oil-ether-colonic method of anesthesia should be used whenever possible for tonsillectomies and other surgical procedures in latent and active or suspected cases of tuberculosis.—DR. S. E. B. FREILICH and O. B. RAGINS, of Chicago, in *Illinois M. J.*, July, 1929.

Psychoanalysis and Psychotherapy

When an able and sympathetic neurologist is placed in possession of the full content of a patient's hidden thoughts, emotions and actions (sexual or otherwise), and when, instead of ignoring them, he recognizes them as really and truly a part of the patient's personality, and takes great pains to make this clear to the patient's mind; then, instead of being a horrid, permanent nightmare obsession and the subconscious cause of great nervous and mental disturbances, they take their rightful place in the conscious personality, so that the patient becomes mentally, morally, emotionally and neurologically regenerated, and will in due time become possessed of that exuberance of health and spirits which should always characterize the normal youth.—DR. J. A. THOMS, of King's Park, N. Y., in *M. J. and Record*, June 19, 1929.

Suppurative Cowperitis

In two personally observed cases of this rare condition, the patients both had had gonorrhea, which possibly was the cause of a secondary, latent infection of Cowper's gland. The first patient was relieved by surgery and diphtheria antitoxin. In this case the antitoxin acted more as a specific than as a foreign protein. Finally, after

relief of the pain, the urethritis would not subside until the sinus at the side of the frenum was resected. In the second case, a perineal fistula did not close until after a nephrectomy, necessitated by the condition of the left kidney.—DR. CHAS. D. DONAHUE, of Portland, Ore., in *Northwest Med.*, June, 1929.

Nocturnal Cramps

Nocturnal cramps are due to inspissation of the blood and may be relieved or prevented by drinking plenty of water before going to bed.—DR. G. GAERTNER, in *Wien. klin. Wchnschr.*

Caffeine in Heart Failure

The action of digitalis is rather slow. In heart failure, caffeine is a valuable stimulant for use while the effects of digitalis are developing.—DR. ROBERT A. HATCHER, in "Chemistry in Medicine."

Honey in Heart Failure

The main role of the carbohydrates is to provide fuel for muscular energy. The heart muscle, which never rests, needs fuel most of all. Honey is a very readily assimilated carbohydrate.

In severe cases of malnutrition, with heart weakness, I have found honey to have a marked effect in reviving the heart action and keeping the patient alive. It is also valuable in pneumonia and other febrile diseases, to maintain nutrition and promote repair of the tissues.—G. N. W. THOMAS, M.B., Ch.B., in *Lancet* (Lond.).

Lessening the Anesthesia Risk in Surgery

The anesthetist should be familiar with the history of the patient and should examine his heart and blood pressure before a contemplated operation. The anesthetic and its mode of administration should be specially selected to suit the patient and the operation, and not be a matter of routine. The mental state of the patient should be carefully considered and the anesthetist should endeavor to gain his implicit confidence. Although the surgeon is in complete command, he should always consult with the anesthetist. The anesthetist

himself is more important than the anesthetic.—DR. J. W. KEEFE, Providence, R. I. in *Anesthesia and Analgesia*, Sept.-Oct., 1929.

Treatment of Cancer by Activated Fluorescein

The work of Copeman and Gouldsbrough, two years ago, demonstrated that malignant cells are killed by exposure to daylight in the presence of fluorescein. Clinical work has further shown that this method of treatment is applicable to superficial cancers, when painted over by fluorescein (which is nontoxic) and then exposed to x-rays or radium. To a certain extent, also, the method is applicable when a fluorescein solution is injected intravenously.

From Jan., 1928 to June 1929, 70 cases of malignant disease, mostly inoperable, were treated by the above authors, in the Royal Northern Hospital, London, with activated fluorescein. In this series there were 7 apparent recoveries, and 20 much improved. Some other successes have also been reported in private practice.—Editorial, *Internat. Med. Digest*, Oct., 1929.

Quinine Intravenously in Pneumonia

The intravenous administration of over 1,200 doses of quinine dihydrochloride has given the conviction that this comes nearer to being a specific in pneumonia than anything else tried. Five (5) to 10 grains (0.32 to 0.65 Gm.) of quinine dihydrochloride, in 10 to 20 cc. of thoroughly distilled water, will control functional tachycardia quicker than any other remedy.

In nearly 100 cases of influenza, a few injections of quinine dihydrochloride, in 10-grain (0.65 Gm.) doses, cleared up the cases in 6 to 36 hours.—DR. C. R. HUCKABAY in *J. Oklahoma M. A.*, Jan., 1929.

Movable Kidney

The individuals in whom movable kidney is present are usually of an extreme neurasthenic type and suffer from a general visceroptosis. It is usually the traction upon the duodenum which is responsible for the pain and the general ptosis should be treated, rather than that of the movable kidney alone. It stands to reason that in this condition there is a constant tugging on the

renal plexus and, indirectly, upon the solar plexus. This leads, naturally, to hyperesthesia in the abdominal sympathetic system and consequent irritability of the stomach, duodenum, gall-bladder and genitals. Whenever a movable kidney is also tender and sensitive to pressure, it is well to think of disease of this kidney such as calculus, pyelitis or tuberculosis.—DR. N. BLAUSTEIN, of New York City, in *Urol. and Cutan. Rev.*, Dec., 1929.

Ephedrine in Allergic Diseases

My observations of the symptomatic treatment of asthma with ephedrine have led me to try it in all cases. It will give the desired result in about half of the cases.

It is evident that ephedrine has a very definite place in the symptomatic treatment of allergic phenomena.—DR. J. C. CARTER, Marshall, Texas, in *Tri-State Med. Jour.*, Nov., 1929.

New Treatment for Seasickness

Four tablets of bellafoline (1 every 2 hours) usually suffice to prevent the onset of seasickness. One more may be taken from time to time when a gastric spasm or nausea appears. The complement of this treatment, belladental (a combination of bellafoline and luminal) is given for the night, 2 tablets before retiring.

For the curative treatment of declared seasickness, bellafoline is given in hypodermic injections. One ampule contains 0.5 mgm. of bellafoline. This dose may be injected twice at an interval of 6 hours and this total of 1 mgm. should not be exceeded.—DR. J. BOHEC, in *Fesse Médi.*, Paris, Jan. 4, 1930.

Posture in Pulmonary Abscess

In abscess and other localized pulmonary lesions, postural drainage, by causing the patient to lie upon the sound side part of the time, is often helpful.—DR. FRANCIS W. PALFREY, Boston, Mass.

Injection Treatment of Varicose Veins

In 53,000 cases reported in the literature, in which the injection method of treatment was followed, there were only 7 deaths—a mortality of 0.0024 percent. Embolism

seems to be the most frequent complication. Recent phlebitis tends towards embolism and is, therefore, a complication. Menstruation, pregnancy, uterine neoplasms, severe cardiovascular disease and old age are other contraindications.—DRS. H. O. MCPHEETERS and C. O. RICE, in *J.A.M.A.*, Oct. 13, 1929.

The Sense Organs and Food

Long continued deficiency of necessary foods or food factors may cause special sense defects; thus the absence of vitamin D may affect the bones of the ear and be a cause of deafness; retinal hemorrhages may follow calcium deficiency.—DR. W. WESTON, in *Ann. Otol. Rhinol. and Laryngol.*, June, 1928.

Treatment of Tabes

In treating tabes and meningo-vascular neurosyphilis, tryparsamide, arsphenamine, mercury and bismuth should be administered indefinitely, until results are obtained. DR. HARRY C. SOLOMON, Boston, Mass.

Convalescent Serums in Erysipelas and Scarlatina

In erysipelas and scarlatina, human convalescent serum, if obtainable, is better than any stock antitoxin made from horse serum.—DR. FRITZ B. TALBOT, Boston, Mass.

Intercardiac Injection Without Injury to the Heart

Dr. Forssmann, of Berlin, has succeeded in passing a fine rubber tube from the veins of the neck to the cavities of the heart. This permits of intercardiac injections without wounding the heart. The introduction of a tube or sound by this route can be made in a few seconds. *Le Siècle Med.*, Paris, Nov. 15, 1929.

The Dyspeptic and Rough Foods

What the dyspeptic often needs is rest for his digestive tract, and that can best be obtained with a smooth diet that has little residue. We know, today, that when the intestinal muscle is weak and tired, liquids will seep through the tube without much trouble, but solid matters cannot pass; they can be carried forward only by well-coordinated peristaltic contractions. I am inclined,

therefore, to tell a man with a flabby digestive tract, or one with irritable, narrow and uphill places, that he should avoid eating rough foods, for much the same reason that he avoids putting paper and bits of wood and cotton down a drain which has a poor drop or, somewhere in its course, an uphill stretch.—DR. W. C. ALVAREZ, Rochester, Minn., in *J. Indiana S.M.A.*, Nov., 1929.

Furunculosis of the External Auditory Canal

Furuncles in the ear are circumscribed swellings in the lining of the canal. Incision and drainage is the treatment when other methods, such as heat application, fail. The incision is best made under a whiff of gas or ethyl chloride. If superficial, the incision is made simply through the swellings; if deep, it must be continued down through the perichondrium. In severe cases, where the whole canal is occluded, incisions may be made with advantage around the whole lumen, radiating like the spokes of a wheel from the hub.—DR. L. E. EFFLER, Toledo, in *Ohio St. M. J.*, July, 1929.

Pituitary Extract in Obstetrics

The uses of solution of post-pituitary in labor here given are orthodox: It is not recommended for the induction of labor: dilatation of the os is a prerequisite; no great disproportion of fetal head and pelvis must exist.

Solution of post-pituitary has a field in
 1.—Substitute for forceps (50 percent of cases);
 2.—Primary and secondary insufficiency of labor pains;
 3.—Postpartum hemorrhage;
 4.—Asphyxia of the new-born;
 5.—Atonic bladder of pregnancy;
 6.—Postpartum paralysis of intestine.—
 DR. HOFSTAETTER, in *Wien. med. Wchnschr.*

Drainage After Appendectomy

Drainage is required after appendectomy in 94 percent of cases in patients under five years of age, and in 100 percent in those over fifty-five years old, the reason being that the diagnosis is made late in 90 percent of cases at these ages, because they do not show typical symptoms.—DR. NELSON M. PERCY, Chicago.

Contusions

Following the immediate treatment for the suppression of pain and edema, the intermediate treatment consists of: (1) application of hot compresses of soapsuds; (2) massage with camphorated oil; (3) exposure to the rays of a 60-100 watt electric lamp.

Each of the above is to be used 10 minutes 2 or 3 times daily and use of the part affected should be insisted upon.—DR. J. J. MOORHEAD, in *Am. J. Surg.*, Apr., 1929.

Control of Impetigo Neonatorum

To insure against epidemic neonatal infections in the obstetric divisions of general hospitals, there should be small nurseries with individual baby units and the adoption of a revised scheme of nursing, whereby nurses are responsible for the care of a limited number of mothers with their babies.

In the Sutter Hospital, Sacramento, Calif., 13 nurses, including a supervisor, are necessary under this scheme for the care of 21 mothers and their babies. By the isolation of babies with suspicious lesions there was no further development of lesions on these or other babies.—DR. E. T. RULISON, Sacramento, in *J.A.M.A.*, Sept. 21, 1929.

Tonsillectomy and Rheumatism

Judging from the recent British and American statistics, the impression is gained that tonsillectomy is not so valuable a procedure in the prevention of rheumatic infection and of heart disease as it has always been regarded.—Editorial, in *Internat. Med. Digest*, Dec., 1929.

Enuresis

Enuresis is a conduct disorder and at the Children's Memorial Hospital all such children are referred to the psychiatric clinic. The responsibility for the act is put upon the child and he is made to understand that it can be stopped when he so desires.

Of 80 cases coming to the clinic, the treatment was continued in 55, and of these 40 (72 percent) have stopped wetting the bed entirely. In these clinic cases, much depends on a competent psychiatric social service worker to control adverse family influences.—DR. R. C. HAMIL, Chicago, in *J.A.M.A.*, July 27, 1929.

Current Medical Literature

Reaction of the Laity to Medical Progress

How is the laity reacting to the great medical progress of the past 25 years? In *Illinois M.J.*, Jan., 1930, Dr. Maude L. Etheredge, of Urbana, points out that, with the present-day great avenues of transmitting information, it is not the question of keeping knowledge from the laity, but how we can give them the right knowledge.

The Parent-Teachers Associations throughout the land are thinking a great deal in terms of health.

Comparing the present spread of health education with the past, the writer remarks that the Reader's Guide for 1905 shows only 2 articles on health in popular magazines for the laity. In 1925 there were 12 health articles, and 17 on health education. With this and the radio and other agencies, the laity is thinking more and more in terms of health. For safeguarding the health of the public, light is the best policeman.

Thymophysin in the First and Second Stages of Labor

Thymophysin is a German preparation introduced in 1925—a combination of thymic and pituitary extracts. It has been used in a number of European clinics to increase the force, frequency and duration of feeble labor pains.

In *Am. J. Obstet. & Gynec.*, Jan., 1930, Dr. J. Jarcho, of New York, reports his experiences with this agent.

The preparation is administered intramuscularly, preferably in the gluteal region, during the first stage, but also in the second stage when the pains have stopped. In the author's experience, it is best to begin with a smaller dose of 0.5 cc., followed by a second similar injection or by a dose of 1 cc., if the first does not prove effective.

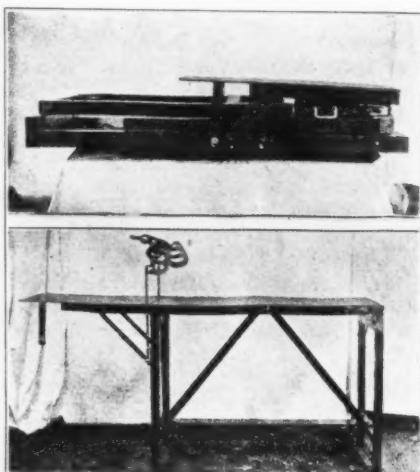
The use of thymophysin, not only hastens and facilitates normal delivery by aiding dilatation of the passages, but also lasts into the third stage, so as to promote expulsion of the placenta.

The most favorable type of case is primary inertia. When the uterine musculature is exhausted by prolonged labor, the preparation proves ineffective. In such cases, the mother should be given a rest before labor is resumed. Then thymophysin may prove of value.

It does not appear to injure the mother or child.

Results are sufficiently encouraging to justify

other physicians having the facilities to employ the preparation and observe the results. In the meantime, final judgement as to its value should be withheld..



Portable Delivery Table: Above, Closed; Below, Ready for Use.

Portable Obstetric Table

A simple, portable delivery table is described by Dr. R. O. Brigham, of Toledo, in *Am. Med.*, Jan., 1930.

The table is a folding wooden one, weighing 34 pounds. It is shown open and closed in the accompanying figures.

With this portable table, which is easily carried to the home, the operator can handle the most difficult of labors as easily as upon any hospital table. A portable nitrous oxide-oxygen apparatus can be used with the table.

Toxicity of Acetarsone

The pentavalent arsenicals, although not less efficient than the trivalent in the treatment of syphilis, have not been so generally used, because there has been an idea that they were more toxic. Stovarsol (acetarsone), an acetyl derivative of the pentavalent group, possesses the property of outstanding importance that it is even more effective when given by mouth than by any other route. It is valuable, not alone in syphilis, but also in the treatment of protozoan diseases generally.

The therapeutic dose of stovarsol was stated

by French writers to be about 0.2 Gm. per kilo. of weight. Several German investigators declared that this dosage was toxic and that the therapeutic results were distinctly less favorable than those claimed.

Investigations by G. W. Raiziss, M. Severac and J. C. Moetsch, of the Dermatological Research Laboratories, Philadelphia, as reported in *Jour. Chemotherapy*, Apr., 1930, showed that acetarsone is even less toxic for experimental animals, administered orally or intravenously, than was stated by the original French investigators. The clinical dose may be increased without danger, so as to hasten therapeutic results.

Bismuth Arsphenamine Sulphonate (Bismarsen) in Spirochetic Infections

The following are excerpts from abstracts of articles published in *J. Chemotherapy*, Apr., 1930, concerning the efficacy of bismuth arsphenamine sulphonate (Bismarsen) in the treatment of syphilis and other spirochetic infections. Bismarsen is administered *intramuscularly*.

Dr. John A. Kolmer, of Philadelphia, states that Bismarsen has proved especially valuable in the treatment of chronic syphilis, because it affords a means of avoiding Jarisch-Herxheimer reactions; it is of particular usefulness in the treatment of Wassermann-fast cases and for children with congenital syphilis, to whom intravenous medication cannot be given. It has yielded encouraging results in pulmonary spirochetosis in severe cases of Vincent's angina.

Dr. Jos. A. Elliott reports upon 95 cases of syphilitic patients who received 1,500 injections. There was 1 severe nitritoid reaction. The author considers that the results obtained warrant a continuation of the use of Bismarsen in selected cases.

Acute Appendicular Disease

Although the time between the onset of appendicular disease and operation is now considerably shorter than it was some years ago, it is said that the mortality is slightly higher. In *Canadian M. A. J.*, Mar., 1930, Dr. D. P. D. Wilkie expresses the opinion that this is due to a lack of appreciation of the type of appendicular disease.

The two primary, acute, pathologic affections of the appendix are: acute inflammation of its wall (acute appendicitis) and acute obstruction of its lumen. The first is relatively mild and harmless, the second is one of the most fatal forms of acute intestinal obstruction.

The onset of acute appendicitis is not dramatic; the clinical symptoms are malaise, abdominal pain tending to become localized in the right side, feverish temperature, furred tongue and constipation.

In acute appendicular obstruction the clinical picture is dramatic—is that of intestinal obstruction, and not of an inflammatory condition. One feature is practically always present, namely, an anxious expression on the patient's face and his realization that something is wrong inside. The pulse may remain practically normal until

the time gangrene has commenced. It is imperative that this clinical picture be recognized in the early stages and that there should be no delay in operating upon the patient.

Differential Diagnosis in Glandular Swellings

Local or general enlargement of the superficial lymph nodes is commonly seen and these swellings usually are of tuberculous origin.

In *Canadian M. A. J.*, Mar., 1930, Dr. D. Graham expresses the opinion that the greatest difficulty in differential diagnosis lies between Hodgkin's disease, in the localized stage, lymphosarcoma, and tuberculous adenitis in its early stage, when the glands are discrete and mobile.

A chronic enlargement of the glands at the angle of the jaw is most often due to tuberculous disease. In Hodgkin's disease the post-auricular or supraclavicular glands are more commonly involved first; they are usually larger and do not become matted together, except in very rare cases where there is co-existing tuberculous infection. Fever, sweating and loss of weight may be present in both conditions. On the other hand, pruritus is absent in tuberculous disease, and the spleen is seldom so large as in Hodgkin's disease.

The differentiation between Hodgkin's disease and lymphosarcoma of Kundrat is more difficult. Some observers do not attempt to differentiate between these two conditions. The clinical picture, at least in the later stages of the two diseases, is quite different. Lymphosarcoma may begin in the tonsil or lymphoid tissue in the pharynx; Hodgkin's disease never begins in these structures. Lymphosarcoma tends to remain localized to a local group of glands; Hodgkin's disease begins as a local enlargement, and, later, with the involvement of glands in other areas, the enlargement becomes more or less generalized. Unless lymphosarcoma begins in the spleen, this organ is not involved; whereas, in Hodgkin's disease it is usually palpable and, in the later stages, both liver and spleen may be markedly increased in size. Pruritus is absent in lymphosarcoma, and fever, apart from a complicating infection, is usually absent.

The Laboratories and Clinical Medicine

Discussing the reputed conflict between the laboratories and clinical medicine, Dr. C. F. Hoover, in *Science*, May 16, 1930, points out that all laboratory tests and technical instruments have been devised to explain problems or to answer inquiries that have been raised by inquiring physicians. No thoughtful physician should resent the substitution of an instrument of precision for his art, if the instrument is more dependable.

But the complaisant submissiveness with which practitioners yield to tests and instruments of precision without clinical evidence, and thus seek to avoid their professional obligations, is to be condemned. Instrumental devices always give

truthful results; but he who employs them must know if the premises on which they are based are true and only a critical clinician can tell if the instrument is employed under the conditions that supposedly are present.

The kind of complaisant practice disparaged is to measure blood pressure instrumentally, without previously analyzing the character of a pulse and estimating the pressure with the fingers; or to have an x-ray picture made of the thorax and then examine the patient. If one examines a thorax after the x-ray picture is seen, he is very prone to make his examination conform to the interpretation of the roentgenogram. Or, with a patient complaining of symptoms that are not readily explained, to make a Wassermann test and on this alone to accept or reject a diagnosis of syphilis. Such methods lower the art and dignity of a diagnostician to that of a conductor of tests. We should be wary of all tests that cannot be incorporated in the sum of evidence. When the test and clinical evidence conflict, we should abide by the evidence.

The very modern fashion to exalt the laboratory and lower the efforts in clinical studies has given rise to a criticism of medical education that frankly offers to lower our educational standards by eliminating a large part of the pre-clinical laboratory work that supposedly has taken the student's interest away from the patient.

If instruments of precision supplant physical diagnosis, there is an obvious confession of diagnostic weakness. If science dulls our wits, then we own a witless science. This has actually occurred in some schools where teaching chairs are occupied by immature clinicians whose diagnostic training has lagged behind their laboratory skill.

Confirmatory tests are an asset and sometimes a necessity. It is not advocated that we should lessen our endeavors in the laboratory, but that we must not slacken our efforts at the bedside.

The Value of Acriflavine in Surgery

Two articles illustrating the value of acriflavine as a bactericide and antiseptic appear in the *Brit. Med. Jour.*, May 3, 1930.

Dr. W. J. Sheehan reports upon two cases of traumatic moist gangrene and one case of traumatic hernia of the spleen.

In the first case of traumatic gangrene a guillotine amputation of the arm was necessitated by the conditions; the stump was treated as an open wound, using acriflavine (1:1,000) dressings only. The result was dramatic, the foul sloughing tissue becoming bright red and clean within four or five days.

In the second case the lower end of the femur was necrotic and protruding; the patella and muscles formed a gangrenous mass. Amputation was declined and the patient's condition was desperate. The limb was dressed twice daily with acriflavine 1:1,000. As in the previous case, the result was highly dramatic. Within three or four days the gangrenous process ceased and granulation commenced. The man recovered.

In the spleen case a complete splenectomy was not possible and only the damaged, necrotic

part of the organ could be removed, as an emergency operation. The abdominal wound was closed and dressed with acriflavine 1:1,000. Recovery was uneventful.

Dr. M. A. Dobbin Crawford points out the value of acriflavine in dealing with the common occurrence of sepsis following vaginal operations. There are various almost unavoidable causes for the contamination of vaginal operative wounds. Dr. Crawford has tried many methods, including the use of a number of common antiseptics, to avoid this complication, without satisfactory results. He now uses an emulsion of acriflavine in mineral oil, as a routine protective dressing in all perineorrhaphies, with success. He waits for 24 to 48 hours to allow the natural sealing of the wound by serum. On the third day he starts dressing with a narrow strip of gauze about 3 inches long, soaked in the emulsion, which is applied by means of a forceps laid upon the colpoperineorrhaphy wound. The dressing is renewed after each micturition. The author has also used this emulsion in other surgical dressings, with success. It is made up in a strength of 1:1,000.

Acute Food Sickness

The term "ptomaine poisoning" has been employed rather loosely to cover many acute conditions arising from the ingestion of food.

In Illinois *M. J.*, April, 1930, Dr. G. Koehler, of the Department of Health, Chicago, suggests the generic term, "Acute Food Sickness" as more suitable. This may be divided into five sub-classes: (1) The infections with the paratyphoid-enteritidis or allied groups of organisms; (2) acute zoon-parasitic infestations, like trichinosis; (3) bacterial intoxications, such as botulism; (4) poisoning from inorganic or organic substances; (5) cases of unknown origin.

Acute food sickness is rather common. During the last four years, 851 such cases have come to the notice of the Department of Health of Chicago, but this does not accurately represent the incidence, as a great many cases are not reported.

In 83.5 percent of the reported series, no definite cause could be determined by laboratory tests.

Without definite laboratory findings, it is difficult to distinguish between isolated cases of acute food sickness and gastro-intestinal disorders or functional disturbances due to dietary indiscretions. All suspicious cases should be promptly reported to public health authorities, so that careful laboratory investigations may be made.

Future of Heart Disease

It is now recognized that rheumatic fever, in youth primarily but also in advanced age, is responsible for at least 50 percent of all heart disease.

In the *Bull. of the Chicago Heart Assn.*, Jan. Apr., 1930, Dr. M. Fishbein cites the following as the best means of prevention: Cleaner mouths, fewer diseased tonsils, fewer neglected decayed teeth, earlier recognition of sore throats and quick care in their treatment as serious infections, the considered and skilled attention to the little child with aching muscles and joints,

repeated examinations of the heart after attacks of any acute infectious fever in childhood and separation of the sick from the well.

Dr. Fishbein says that the answer to the future of heart disease rests, as do the answers to most of the serious questions of modern medicine, in two main divisions: More and more intensive research into the causes and means of prevention of crippling and disabling diseases; and more and more education of the public as to the importance of early recognition and of immediate care.



Recto-Photor

In *Presse Méd.*, Paris, May 17, 1930, Dr. M. Delort gave a short description of an instrument, which he states to be the first of its kind in the world, for taking photographs of the rectum. This recto-photor is adaptable to existing rectoscopes. It takes 5 photographs successively which give very clear enlargements.

The accompanying illustration shows how the recto-photor looks. It is made by Drapier, 41 rue de Rivoli, Paris, I.

Tribromethylalcohol (Avertin) Rectal Anesthesia

The introduction and extension of electro-surgery has increased the danger of using explosive mixtures for anesthesia.

In *Arch. Physic. Ther., X-Ray, Radium*, Mar., 1930, Drs. M. R. Guttman and J. R. Guttman, of Chicago, call attention to the qualities of tribromethylalcohol (avertin) as a rectal as well as a general anesthetic.

Avertin is rapidly absorbed from the rectum and anesthesia is quickly induced without previous excitation. There is a wide gap between the anesthetic and lethal doses. It is not explosive and it is claimed that there are no untoward after-effects.

The authors point to its value, especially in head and neck electro-surgery. They have used it successfully in many cases of accessible malignant tumors. The anesthesia is complete, with thorough relaxation.

It is stated that, in Germany, Avertin has been used in over 100,000 cases without fatality due to the anesthetic.

Metaphen for Furunculosis of Auditory Canal

In *Eye, Ear, Nose and Throat Monthly*, Feb., 1930, Dr. D. H. Trowbridge, of Fresno, Calif., states that the use of Metaphen in furunculosis of the external auditory canal has given him more satisfaction than anything he has ever tried.

Full strength Metaphen (1:500) is introduced on a cotton pledge into the swollen canal. The

pack is replaced after half an hour by a fresh one which is removed after an hour or two. A 1:1,000 Metaphen solution is prescribed for the patient's home use to be instilled and allowed to remain for 15 to 20 minutes.

Acute Surgical Emergencies

Some life saving details in acute surgical emergencies are given by Dr. E. H. Risley, of Waterville, Me., in *Maine M. J.*, Mar., 1930.

1.—Traumatic head cases should be thought of in terms of intracranial pressure, and treatment of those without localizing symptoms should be by repeated spinal tapping, measured by the spinal manometer.

2.—Spinal tapping is a valuable procedure in the intracranial injuries of the newborn.

3.—Intercostal stab wound closed drainage, under local anesthesia, and aspiration of the pericardial sac in pericarditis with effusion and acute empyema are often life-saving procedures.

4.—The preliminary treatment of the toxic, dehydrated, exhausted patient with acute intestinal obstruction is generally time saved rather than wasted. Enterostomy under local anesthesia is far safer than a one-stage exploratory abdominal operation on these desperately sick patients.

5.—One should be constantly on the outlook for acute postoperative dilatation of the stomach after every operation. It rarely conforms to the textbook picture.

6.—Preliminary enterostomy, before resection of the colon for carcinoma, is necessary for the best results and a low mortality.

7.—Stab wound drainage should be more often made use of.

8.—The use of the suction apparatus and Cameron surgical lights is of greatest service in cholecystectomy and in any condition where there is fluid in the general peritoneal cavity.

9.—A plea is made for the more frequent employment of local and spinal anesthesia, especially in strangulated hernia, in prostatectomy and in many cases of intestinal obstruction.

Medical Supervision of Aviation Pilots

The medical fitness, physical and psychic, of aviation pilots is a matter of very great interest to the public at large.

In *J.A.M.A.*, Apr. 26, 1930, Dr. H. J. Cooper, of the aeronautics branch, Department of Commerce, gives details of the extreme care exercised by the Government, not only that pilots are thoroughly fit, in body and mind, for all emergencies that may arise in flying, but also that they are periodically examined to ensure that this fitness is maintained. The continued issuance of licenses depends upon passing the necessary tests.

The Army and Navy adopt their own standards of selection. At present approximately 50 percent of selected students complete the flying course of instruction.

There are about 750 physicians throughout the country who aid the Department of Commerce as aviation examiners and, up to now, about 58,000 such examinations have been made and recorded. Only about one-third of those

receiving a student's license reach a higher grade of license within a year. The other two-thirds fall away or are disqualified for various reasons.

It has been tentatively determined that the age limit, beyond which learning to fly becomes more difficult by reason of the age factor alone, is 35 years.

A gratifying feature is that operators of air lines voluntarily cooperate with the government officials in maintaining the highest degree of physical and mental efficiency in their pilots. On the least sign of deterioration they are laid off for rest and recuperation. The public safety is the first consideration as regards the condition of pilots.

Treatment of Alopecia with Acriflavine

A new treatment for generalized alopecia and similar affections is described by Drs. H. Jansion, R. Sohier and Antonelli, in *Bull. Soc. franc. de dermat. et syphil.*, Dec. 1929. This is termed the photodynamic reaction treatment and consists in the injection, intravenously, of a substance—acriflavine—capable of sensitizing the organism to ultraviolet radiation, and followed by such irradiation.

A 2-percent acriflavine solution is used, and 5 cc. are injected intravenously.

Half an hour after the injection, the irradiation is applied. A quartz-mercury vapor lamp (probably water cooled—ED.), of 40 volts, is used in contact with different fields of the scalp. The application is usually, at first, for 3 minutes.

A 110 volt lamp, well focalized, may be used at a distance of 50 centimeters for 10 minutes and this will also produce the stimulation necessary, although not equally with the first method.

The alopecic area is rubbed well with oil of coco prior to the irradiation.

It is necessary to continue the treatments for about 20 seances, occupying a period of about two months. Toward the end, the new growth of hair will become apparent. The treatments are given every 2 to 4 days.

The authors usually apply the irradiation following each injection of acriflavine; but as an alternative the irradiation may be delayed until there is a cumulative effect of 10 or 15 injections.

The authors have used this treatment for the past 3 years. Altogether 61 cases have been treated and there was but one failure.

Non-Gonorrhreal Urethritis

In *Urol. and Cutan. Rev.*, Mar., 1930, Sir A. Castellani, of London, Eng., states that non-gonorrhreal urethritis are not of frequent occurrence, but they are not so exceedingly rare as some would seem inclined to believe.

Non-gonorrhreal urethritis may be classified into three groups: (a) of traumatic origin; (b) of protozoal and metazoal origin; (c) of mycotic origin. Those of the third group are the most important, from a practical point of view; as in the case of so many other mycoses (bronchomycoses, for instance) there is primary and secondary mycotic urethritis.

Practically all the protozoa and fungi found

in non-gonorrhreal urethritis of the male have been found also in cases of vaginitis and vulvovaginitis, and it is not, therefore, very improbable that, in certain cases and under certain circumstances, these affections may be transmitted by sexual intercourse.

Bismuth in Congenital Syphilis

Bismuth therapy, exclusively, in series of cases of congenital syphilis, has been tried by several clinicians who have generally reported favorable results.

In *Am. J. Dis. Child.*, Feb., 1930, Dr. J. F. Coppolino, of Philadelphia, reports his findings in 26 cases.

The preparation used was bismuth salicylate in oil, suspended together with camphor and creosote, 1 cc. of which contains 130 mg. of metallic bismuth. The dose was 65 mg. for children under 1 year and up to 130 mg. for older children, by intragluteal injections, alternately into the upper and lower quadrant of each buttock. The only complication observed was a transitory albuminuria; in a few cases some casts and epithelial cells were found in the urine.

The course of treatment consisted of 20 injections, at weekly intervals. The maximum number of courses was three, the rest interval being 4 weeks.

Of the 26 children treated, only 12 persisted for one or more complete courses.

In all cases, the Wassermann reaction was 4 plus at the beginning.

The bismuth was well tolerated by infants and children. The treatment was most efficacious in young infants, rendering them both symptom-free and serologically negative.

The author, however, thinks that no absolute valuation of the drug can be made at the present time.

Cod-Liver Oil and Viosterol as Antirachitic Agents

A clinical test of the comparative values of cod-liver oil and viosterol as antirachitic agents has been made in the pediatric department of the New York Post-Graduate Medical School and Hospital and the results which follow are given by Drs. A. G. DeSanctis and J. D. Craig, in *J.A.M.A.*, Apr. 26, 1930.

1.—Cod-liver oil, given in a dosage of 3 teaspoonfuls daily (from 1,400 to 1,700 Oslo rat units or from 140 to 170 Steenbock rat units of vitamin D), prevented rickets in 97 percent of 100 cases studied.

2.—Viosterol 100 D, given in a dosage of 10 drops (3,000 Oslo rat units or 300 Steenbock rat units of vitamin D) daily, prevented rickets in 77 percent of 123 cases studied. In other words, 23 percent in this group developed clinical signs of rickets.

3.—Many writers have reported that, in large series, infants receiving no antirachitic agent at all develop signs of clinical rickets in about 25 percent of cases.

4.—Viosterol given in the dosage recommended at the present time by its various manufacturers is less effective in the prevention of rickets than is cod-liver oil. In this series of

cases, the infants on viosterol received about twice as many rat units of vitamin D as those on cod-liver oil.

5.—From the foregoing observations, one of two conclusions may be drawn: Either the present recommended prophylactic dose of viosterol is too small to prevent rickets; or rickets is not due to a deficiency of vitamin D alone. We are inclined to believe that the second of these possibilities is true.

Metaphen and the Blood Plasma

In an article by Arthur W. Hirschfelder and Harold N. Wright, dealing with the ultramicroscopic properties of neosarsphenamine and certain antiseptics, which appeared in the *J. Pharmacol. and Exper. Therapy*, for May, 1930, the authors report some interesting and practical observations on the properties of Metaphen, in its reactions with the proteins of the blood plasma.

Metaphen did not produce any noticeable changes in the ultramicroscopic appearance either of egg albumin or plasma, presumably because it has but little affinity for the plasma proteins. It would seem, therefore, that this drug should show but slight tendency to produce anaphylactoid reactions on intravenous injection.

In this connection, it is interesting to note that Prof. J. Urner, of the Department of Gynecology, Minneapolis General Hospital, has informed us, on the basis of a small series of cases, that toxic reactions do not seem to occur so frequently after the intravenous injection of Metaphen as after the intravenous injection of Mercurochrome.

Functional Dysinsulinism with Epileptiform Seizures

Dysinsulinism due to organic pancreatic disease is now established as a definite cause of epileptiform seizures.

In *J.A.M.A.*, Mar. 22, 1930, Drs. J. M. Nielsen and E. L. Eggleston, of Battle Creek, Mich., report upon 3 such cases, treated with frequent feedings or with suprarenal gland or with both, and the attacks of unconsciousness have ceased.

The starvation blood sugar (taken from breakfast) is not always nor in all cases an index of the prevailing low point in the patient studied, especially in cases of functional dysinsulinism.

Frequent feeding alone may suffice, in these cases, to prevent epileptiform seizures; but frequent feeding, plus suprarenal gland by mouth, is a surer way of maintaining sufficient blood sugar to prevent attacks.

The treatment outlined has no effect whatever in cases of idiopathic epilepsy.

Scarlet Fever Prophylaxis

The use of blood serum from persons who have recovered from scarlet fever, as a prophylactic measure, has been taken up by the Detroit Department of Health and the results are reported by Dr. F. M. Meader in *J.A.M.A.*, Mar. 1, 1930.

Four hundred and fifty (450) persons had been in contact with cases of scarlet fever were given 7.5 cc. each of the pooled blood

serum from donors who had had scarlet fever within a year or a little longer. The serum was given to the contacts within 6 months from the time it was drawn.

A study of the subsequent history of the contacts shows that 2.9 percent developed scarlet fever, while 12.8 percent developed scarlet fever in a similar group of contacts who did not receive the serum. Apparently about 85 percent were protected from developing scarlet fever in the group who, without such protection, would have developed scarlet fever.

Immunity apparently does not last longer than 3 or 4 weeks.

This prophylaxis is particularly valuable for young children who have been recently exposed to scarlet fever. It is also recommended for the infirm. It has been found useful in checking outbreaks in hospitals and other institutions.

About 100 to 300 cc. of blood was drawn from the donors, filtered and sterilized.

Criticisms of Today's Syphilitotherapy

Four aspects of present-day syphilitotherapy are criticized by Dr. J. H. Stokes, of Philadelphia, in *J.A.M.A.*, Apr. 5, 1930, namely: organized and socialized treatment; the bismuth problem; late syphilis affecting the heart and nervous system; and smoother treatment.

Outside the United States, public health organization has succeeded in controlling venereal disease. Dr. Stokes remarks that this will be far from an unqualified good if, into the control of venereal disease by organized (including huge business) agencies, is imported the all-too-evident weaknesses of wholesale medical service. If there must be organizations to control venereal disease effectively, it had better come from the Public Health Service than from business organizations, and better still from within the medical profession. The trend of successful venereal control, as a world movement, is at this moment unmistakably organizationward.

Bismuth, especially in combination with arsenamine, is supplanting mercury in the treatment of syphilis. The combination of bismuth with an arsphenamine, in the form of bismuth arsphenamine sulphonate (**Bismarsen**), already has a bright future ahead of it. The arsphenamines should, in Dr. Stokes' opinion, never be used alone or insufficiently, and bismuth should never be substituted for them in the treatment of early syphilis.

As a means of opening the course of treatment, in the patient with late syphilis, bismuth has most excellent qualities. It prepares the way for the arsphenamines.

Dr. Stokes decry's the exploited intravenous injection of bismuth. He thinks that a few of the good bismuth preparations available (such as the fat-suspended potassium bismuth tartrate or the salicylate) should be selected by the physician and the method of administration thoroughly mastered. All other preparations should be left unnoticed until they are thoroughly tested and proved by time.

For the prevention and control of cardiovascular and neurosyphilis, Stokes believes that tryparsamide treatment should, for many reasons, have preference over any method now in vogue. This method should be persevered in for at least 2 years. The malarial treatment is in no sense one for the practitioner.

Too many patients, at the present time, fail to persevere in the necessarily long treatment of established syphilis. Severe reactions must be obviated by a more thorough examination and knowledge of the patient and by improvements in technic. There is too little knowledge of the pharmacologic differences between drugs (as, for instance, between arsphenamine and nearsphenamine), and the patient suffers in consequence. Another fertile cause of severe reactions is the too rapid injections. The necessity for slow, very, very slow, injection is stressed by the writer.

A point in practice for the palliation and control of arsphenamine reactions, mentioned by Dr. Stokes, is that *ephedrine* is given before the injection for 2 days, in 50 mgm. doses. Also 10 cc. of calcium gluconate, given intravenously or intramuscularly, just before arsphenamine injections, has seemed to smooth the course of some otherwise exceedingly reactive patients.

This article of Dr. Stokes should be read in full by every practitioner who treats syphilis. There are numerous points of technic and observations of medication, based on extensive practice, that are exceedingly valuable and cannot be reduced to a short abstract.

Is the Hernia Operation a Failure?

Major G. M. Randall, Med. Corps U. S. A. (Ret.), Chicago, in *M. J. & Record*, Jan. 15, and Feb. 3, 1930, reviews the postoperative history of surgically treated inguinal hernia. He cites the expressed opinions of many leading surgeons of the country on this question and concludes that there is no doubt that the consensus of opinion of the older, more experienced and more conservative surgeons is that the so-called radical operation for inguinal hernia is not a cure at all, and this opinion is confirmed by actual results.

Wide experience is emphatic evidence against the expediency of operation for hernia except in cases of strangulation, all of which could have been prevented by early or later application of a scientifically applied, appropriate truss. The author sees in his clinic, on an average 5 to 15 cases of recurrent or incisional hernias daily, many of the patients being found to be permanently disabled and beyond help or relief.

Consequently the author operates only when necessary and never unless necessary.

Angina Pectoris

Dr. K. F. Wenckebach, of Vienna, Austria, in *M. J. & Record*, Feb. 19, and Mar. 5, 1930, states that he considers the anginal pain to be the central phenomenon at the time of the unleashing of anginal states. This pain (which is itself a result of arterial stasis), when the blood vessels are diseased, is able to change the physiologic process of "beginning check" (the "second wind" of athletes) into an agonizing affliction.

Only two points in the therapy of angina pectoris are discussed. First, the value of nitrates in opening up the peripheral circulation. Some method of permanently keeping the peripheral

circulation open would be the greatest advance in the treatment of angina pectoris.

The second point is that the arterial sympathectomy should be able directly to interrupt pathways conducting the pain, and prevent the harmful vicious circle of the attack by checking the passage of the pain.

Hemolytic Streptococcal Septicemia and Blood Transfusion

The value of blood transfusions in hemolytic streptococcal septicemia is doubtful. Dr. R. A. Kordenay, of Chicago, in *Illinois M. J.*, Feb., 1930, reports that, in 12 such cases treated by whole blood transfusion, 10 of the patients died and 2 recovered. The mortality rate, where long-chained hemolytic streptococci were revealed by blood culture, was 100 percent, while the rate when short-chained streptococci were found was 60 percent.

The author believes, nevertheless, that transfusion of whole unmodified blood should be performed very early in the course of the disease, in conjunction with other measures directed to rendering the invading organisms less virulent and more susceptible to the phagocytic action of the freshly introduced leukocytes and the opsonic power of the plasma of the donor's blood.

Treatment of Deafness

Twenty years' experience in the treatment of the deaf has convinced Dr. Harold Hays, of New York, that the only way to get good results is to have the patients under complete control. The following outline of his method is given in *M. J. and Record*, Mar. 19, 1930:

- 1.—A careful history of each case.
- 2.—A careful test of the hearing, with the Audiometer and tuning fork if necessary. This test to be repeated at least once a week.
- 3.—A painstaking local physical examination, including examination with the nasopharyngoscope, the vibratory otoscope, etc.
- 4.—The patient to remain in the hospital for a period of four weeks. This will not mean that patients will be hospitalized in the usual sense. Certain basic treatments will be given there, but otherwise their time will be filled up by placing them under the direction of a hostess who will know what pleasures are best for the individual case.
- 5.—A thorough general physical examination by a recognized internist.

6.—An examination of a twenty-four hour urine, stool and blood chemistry on every patient. A basal metabolism test if necessary.

7.—An x-ray study of the sinuses, teeth and mastoid processes of every patient.

8.—General and local therapy as outlined by the internist and otologist.

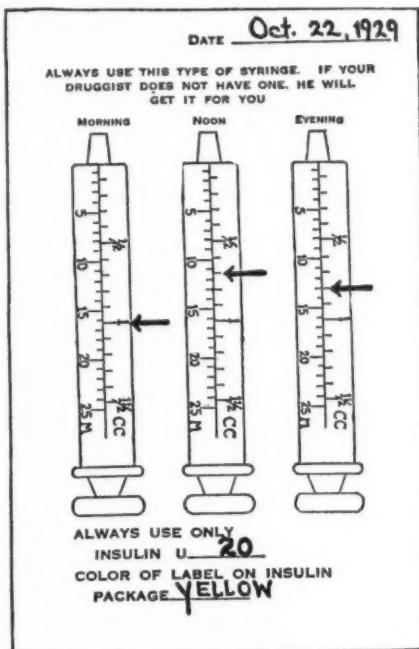
9.—Diathermy, other electric treatment and vibratory massage will be given at the hospital.

10.—Daily lessons in lip reading to every patient. Unless the patient has a minor degree of deafness, this will be insisted upon. The value of lip reading can not be overestimated.

11.—Visits to the office for local treatments as often as necessary. This will no doubt be about twice a week.

12.—A final checkup of the patient. A complete analysis of the case to be sent to the patient's doctor so that he can use some followup treatment.

No operative procedure will be attempted on referred cases unless a special request is so made by the doctor referring the case.



Graphic Demonstration of Insulin Dosage

Owing to the many gradations for the different strengths of insulin, some patients find it difficult to follow the correct dosage to inject.

In *J.A.M.A.*, Feb. 1, 1930, Dr. H. M. Bowcock, of Atlanta, states that this problem was solved by giving each patient a graphic record of the dose of insulin to be taken, morning, noon and evening, and a record of the strength of the insulin prescribed. A copy of this card is given here.

Hyperkineticism

A conception of animal life as a series of energy transformations, from potential into kinetic, is put forward by Dr. G. W. Crile, of Cleveland, in *Illinois M. J.*, Feb., 1930.

Dr. Crile states that, as the result of laboratory and clinical investigations, it would appear that the organism has been evolved on the principle of electric control, and that it is the function of the adrenal glands and of the vegetative nervous system to establish and to maintain and adaptively to change the differences in potential among the different organs and

tissues, in order to meet the conditions of struggle and survival, such as fighting or escaping, mating and procreating, combatting infection, etc.

If this conception is true, then there is a collaboration among all of the organs and tissues which are concerned, not only with the struggle of life, but with the maintenance of life itself. The entire nerve mechanism, the adrenals, the thyroid and in a secondary sense other ductless glands, act reciprocally; that is, they reciprocate in a stepping up of activity (hyperkineticism).

Rectal Anesthesia with Avertin

The advantages of Avertin (tribromethylalcohol), which is administered by rectum, for the production of safe and efficient general anesthesia, are set forth by Dr. A. Spiegel, of Brooklyn, in *Am. J. Surg.*, Jan., 1930.

The German discoverers of Avertin claim that it offers a wide margin of safety, that it does not irritate the mucous membrane nor increase the danger of general anesthesia and that it permits the performance of almost any operation.

The dosage is from 80 to 150 mgm. per kilo of weight, and the safety of the drug depends solely upon the relatively large margin between narcotic and lethal doses.

The author's experience with Avertin is based upon its use in 200 operations, half of which were done in Germany, the great majority being major operations in various regions. Only 6 of the patients vomited after operation. In 3 of these, the author ascribes the result to the use of retention enemas of dextrose and saline solution, immediately following operation. As Avertin is eliminated in the form of glycuronic acid, it seems that the additional glucose produces a certain degree of toxicity. There has been no vomiting since the discontinuance of the enemas.

The duration of operation may be extended to 2 or 3 hours without unfavorable reaction. The patient awakes calm and comfortable, without nausea, and the tendency to flatulency is comparatively slight.

The author, states that, thus far, over 80,000 cases of Avertin anesthesia have been reported in the German literature and the enthusiasm for this method is constantly increasing.

Colonic Focal Infection of Urogenital Tract

That there is a close pathologic association of the urinary tract and the colon is pointed out by Dr. F. H. Redewill, of San Francisco, and associates, in *J.A.M.A.*, Mar. 8, 1930. It is shown that, owing to intestinal autointoxication and stubborn constipation, the colon is a site of focal infection and has a direct bearing on cases of acute and chronic nongonorrhreal infections of the genitourinary tract.

In such cases of colonic focal infection, this condition has to be eradicated, preferably by methods to change the intestinal flora, in order to subdue or eradicate the offending pathologic organism, before the genitourinary infections can be definitely cleared up.

The intestinal flora can be changed to a physiologic bacterial count by: (a) Regulating the diet in the individual case; (b) administering viable, potent cultures of acidophilus milk, by mouth, for from three to six weeks; and (c) implantation of colon bacilli by rectum, following; (d) colonic irrigations.

A more definite and fuller cooperation should exist between the urologist and the gastroenterologist, in order to cope thoroughly with any nongonococcal genitourinary infections that may probably have their origin in the colon as the definite site of focal infection.

The authors have found that, when no other treatment is given except diet regulation, it requires from four to six weeks, taking from 10 to 16 ounces (300 to 475 cc.) of strong viable cultures of *B. acidophilus* a day, by mouth, to change the intestinal flora markedly.

Sodium Malate as a Substitute for Sodium Chloride

The great extent to which salt-restricted diets are prescribed for different pathologic conditions, as well as other reasons, have made it desirable that a dietary substitute for sodium chloride should be found.

In *Ann. Intern. Med.*, Feb., 1930, Dr. J. C. Krantz, of Baltimore, reports that, as the result of a series of investigations to discover a suitable substitute, this has been found in sodium malate. This substitute, which properly is constituted of 85.5 percent sodium malate, 9 percent sodium citrate, 5 percent ammonium citrate and 0.5 percent manganese bromide, possesses the agreeable "saltiness" of sodium chloride (the acid radical closely resembling the chlorine ion in taste) and adequately takes the place of table salt.

Sodium malate has been tested clinically by many physicians during the past year in about 150 cases, in all of which the patient found it an adequate dietary substitute for sodium chloride. In no case was any untoward effect reported. Further clinical tests are being made.

Psychic Factor in Cardiac Disease

Psychic disturbances associated with actual or supposed heart disease are frequently the result of some injudicious statement or action on the part of a physician, often a life insurance examiner.

The psychic reaction to doubt concerning the integrity of the heart seems to be much more violent and profound than is the case with any of the other internal organs. Most persons, who would accept with considerable equanimity the knowledge that they had some disease of the liver or kidneys or lungs, will have their morale sadly shaken by any evidence that the heart is not functioning properly. In the minds of most laymen the thought of heart disease is still associated with the idea of sudden and unforeseen death. This is perhaps the reason why the cardiac neuroses occupy such a prominent and important place in the list of organ neuroses.

But even though a careful search may fail to reveal a direct and obvious relationship between the cardiac symptoms and some definite psychic

disturbance, it will rarely fail to disclose evidences of some instability of the nervous system, as it relates either to the mind or to the autonomic mechanism.—DR. L. A. CONNER, of New York, in *J.A.M.A.*, Feb. 15, 1930.

The Sphenopalatine Test

When Sluder, in 1903, intercepted a passing current and arrested a remote dysfunction, he opened up a field of the first magnitude—the investigation of sensory, motor, secretory, respiratory, and circulatory dysfunctions by the interception of the efferent current energy that actuates them.

As explained by Dr. Hiram Byrd, of Detroit, in *J. Mich. St. M. A.*, Apr., 1930, the sphenopalatine test depends upon the demonstration of excess efferent current, routed via the sphenopalatine ganglion. It is postulated that efferent currents flowing from the brain may be in excess and be registered in various regions, causing dysfunctions. Thus glaucoma, lumbago, sciatica, angina pectoris, etc. are the registrations of excess efferent currents in different regions and tissues and their symptoms will cease when the motivating energy is withdrawn.

The sphenopalatine test is a mode of determining whether the efferent current that is motivating a symptom is routed through either sphenopalatine ganglion, and, if so, which, the right or left. The affected ganglion is anesthetized and the symptoms cease.

Butyn is employed for anesthetizing the ganglion. When a sphenopalatine ganglion is anesthetized with Butyn, it is impervious to the passage of currents for 3 or 4 hours.

The technic of the sphenopalatine test is as follows:

Armamentarium:—An applicator, absorbent cotton, epinephrin, and Butyn. The applicator is of aluminum, and slender, with about a centimeter of the handle bent to a right angle, and about two centimeters of the tip subjected to heat for pliability; the cotton should be of long fiber; the epinephrin, 1:1000; and the Butyn a 50-percent aqueous solution.

A pinch of cotton is wound upon the tip of the applicator into a smooth, compact spindle, about five millimeters in diameter at the center. This is dipped into the epinephrin solution and squeezed dry between the forefinger and thumb, so as to flatten it in the same plane with the bent handle. At the same time, the tip is bent to an angle of about thirty degrees in this plane. Two drops of Butyn solution are added, and the applicator is now ready to be placed.

Standing on the right side of the patient, with the left forearm resting upon the patient's head and the left forefinger slightly raising the tip of the nose, the operator introduces the applicator, coaxing it along the floor of the nose or wherever its passage is found to be easiest, to a depth of about $2\frac{1}{4}$ inches, when it will be felt to come into the open space of the nasopharynx. The curved tip is now rotated outward to an angle of about forty-five degrees, when it makes contact with the pharyngeal wall. It is left in this position for about five minutes, close watch being kept during this time to see that contact with the wall is continuous, when anesthesia of the sphenopalatine ganglion should be complete.

Caution:—During this process, close observa-

tion should be made of an untried patient and, should any pallor, nausea, or other untoward symptom supervene, the test should be immediately discontinued.

Several clinical instances in which this test has been applied are given by the author. This test gives the physician a method of scientific precision with which to investigate the vast realm of pain that cannot be touched in the laboratory.

Gold-Sodium Thiosulphate in Lupus Erythematosus

In *New England J. Med.*, of Jan. 30, 1930, Drs. H. P. Towle and J. L. Grund review the literature during 1929, relating to the efficacy of gold salts in the treatment of lupus erythematosus. Most of this literature consists of the reports of clinicians to various dermatologic societies.

In 14 of the 16 cases of lupus reported upon, there was a clinical cure or great improvement in 7 (50 percent); improvement in 4 (28 percent); in 3 (20 percent) there was no improvement or a recurrence. In the 2 other cases, the treatment was discontinued in one and the result not reported in the other.

Miller (*Calif. and West. Med.*, Oct., 1929) reported 53 cases, of which 60 percent improved. This percentage approximates the 5 total results in the individual case reports given above.

A few cases of severe reactions following the gold sodium thiosulphate injections for lupus erythematosus are cited from the foreign literature.

Nonspecific Treatment of Neurosyphilis

The status of a group of patients with neurosyphilis, treated at the Mayo Clinic by fever therapy and now under observation from 3 to 5 years, is reported by Drs. P. A. O'Leary and L. A. Brunsting, in *J.A.M.A.*, Feb. 15, 1930.

From June, 1924, until April, 1929, 509 patients were treated by malaria. An additional 140 patients were inoculated with *Plasmodium vivax*, but malaria did not develop. The patients who have shown outstanding results are those with early manifestations of paresis, those with paresis *sine paresi*, and those with asymptomatic neurosyphilis who failed to show response to intravenous medication. Of the original 24 patients treated by malaria and reported on in 1925, 10 are still in complete remission; 5 have not shown improvement or have steadily progressed; 4 are dead; and 5 have not been heard from for more than two years.

The serologic reactions, although of interest, are not always of prognostic significance, and an effort to evaluate the method of treatment from the serologic reactions alone may be misleading. The objective signs of parenchymatous neurosyphilis, which are the result of a destructive process in the nervous system, are not materially influenced by this form of treatment. On the other hand, the more meningeal the degree of the involvement, the better the results.

Several patients who showed obvious clinical signs of paresis, but who were in complete remission for about two years following treatment

by malaria, have manifested signs of slow but steady mental deterioration. The evidence from this study and a review of the literature indicate that the life expectancy of patients with paresis is increased by treatment with malaria, even though complete remission does not develop. Notwithstanding opinions to the contrary, results of this type are not a contraindication to the method.

Treatment by typhoid vaccine may be substituted if treatment by malaria is not possible, although the therapeutic remissions in our experience have been less frequent and less pronounced.

Instalment Payments and Sickness Insurance

The public prints bristle with complaints about the high cost of medical care, but, according to Dr. Michael J. Davis, of the Julius Rosenwald Fund, Chicago, writing in *J.A.M.A.*, for Mar. 29, 1930, for every dozen such outcries there is an average of about one panacea and less than one fact. Relief does not, he declares, depend upon rabbits' feet, but upon facts. We need to know, accurately: (1) The size of the Nation's sickness bill; (2) who receives the money; and (3) who pays it. We need more brains and less blame in this matter.

Huge as our sickness bill may appear, when expressed in nation-wide figures, it is less than the people spend annually for candy, chewing gum and tobacco; and about \$800,000,000 of the total is not paid by the sick people but out of taxes and the contributions of philanthropists.

The practical expedients for relief suggested by Dr. Davis consist of a regularly organized plan for the payment of the expenses of illness in instalments, and a better developed and more universally applied system of sickness insurance, especially such as would cover hospital bills.

The doctor sums up his findings and conclusions thus:

1.—The annual outlay of people of the United States, for the care and prevention of sickness, is tentatively estimated as \$2,841,000,000.

2.—Doctors' bills make slightly less than 25 percent of this total. Hospitals and clinics make 30 percent; medicines and medical supplies 25 percent.

3.—The expenditure for prevention of disease is only about one thirtieth of the total and is far too small, as compared with the vast expenditure for cure.

4.—There are large wastes in the present expenditure, as for unnecessary drugs and medicines, for unscientific forms of treatment and for overhead and duplication of medical facilities.

5.—The public that purchases care in sickness must bear a share of the responsibility for the cost of medical care, because of poorly directed spending.

6.—The total of the sickness bill is only about one thirtieth of the national income.

7.—The source of complaint about sickness bills is not so much the amount as the manner of distribution.

8.—Sickness bills differ from nearly all other expenditures in the family budget, because they occur with uncertainty and they fall unevenly.

9.—There is evidence that approximately half of the total sickness expenditures falls annually on about one sixth of the families in any given group.

10.—To solve the financial problem of sickness means, in part, the reduction of costs but, in larger part, the redistribution of burdens.

11.—Systematic arrangements for instalment payments of the larger sickness bills may be of some assistance in helping people to pay them.

12.—Insurance against sickness bills, particularly hospital care, should be developed on an experimental basis and separated as fully as possible from the complex issues of professional service.

Follow-Up Study of Hypertension

A follow-up study of hypertension in 401 cases, by Drs. J. M. Blackford and associates, of Seattle, as reported in *J.A.M.A.*, Feb. 1, 1930, shows that it occurs in a moderate degree (from 175 to 200 systolic) in males and leads to a 70 percent mortality in a 5-year follow up.

The appreciable incidence (1.2 percent) of hypertension begins in the fourth decade; 5.8 percent of all patients examined in the fifth decade showed hypertension; 12.3 percent in the sixth; 22.5 percent in the seventh; 14 percent in the eighth; and 10 percent in the ninth showed blood pressures above 175.

Sixty-five (65) percent of the hypertensive cases in this series are in women; 50 percent of all patients examined were women.

The remarkably greater number of women having hypertension, as compared with men, comes in the fifth, sixth, and seventh decades.

Family histories of hypertension were noted in more than one third of all histories.

Cases of hypertensive disease complicated by goiter, syphilis, diabetes, chronic nephritis and valvular heart disease have each shown, by groups, no particular difference from cases of pure hypertension.

A follow-up study of 222 of 401 hypertensive patients (55 percent), examined from five to eleven and one-half years ago has been made. Twenty of these have been discarded for statistical study because they were moribund at the time of examination or died shortly afterward from other diseases. The 202 cases remaining, followed from five to eleven and one-half years, have shown:

A gross mortality of 50 percent; a male mortality of 70 percent; and a female mortality of 39 percent.

A mortality about the same for moderate and marked cases, but twice as high in extreme cases.

An average duration of life after the first observation of 32 months for males and 44 months for females.

An average time since the first examination of 101 living patients of 81 months.

Known causes of death: Thirty-one (31) from cerebral complications; 25 from heart disease; 18 from uremia.

The authors did not find any tendency toward recovery in hypertension.

Occasionally remarkable exceptions are seen to the general rule of mortality. Women with hypertension sometimes outlive their expectancy. Men almost never do.

Urologic Disease and Internal Medicine

There is a needless sacrifice of health and even of life, due to failure of the urologic patient to obtain the skilled service of the urologist.

Dr. H. G. Beck, of Baltimore, in *J. Urol.*, Feb., 1930, gives a study of 284 patients who had drifted into a private medical clinic where they were observed chiefly from the standpoint of an internist. In these patients there were found 475 urologic lesions.

Dr. Beck remarks that, in patients suffering with urologic disease, the symptoms are so often indefinite and referred to other situations that they do not ascribe the source of their affliction to the proper organs (stomach, heart, skin, joints, etc.) and, therefore, they are apt to consult specialists in other fields.

In order to avoid these errors there must be established a more intimate relationship and better cooperation between the specialist and surgeon, on the one hand, and the general practitioner on the other. This can best be consummated through the intermediation of the internist. It is in this capacity that the internist can best serve the interest of the profession and the patient.

Infection of Respiratory Tract and Sinuses in Vitamin A Deficiency

Deficiency of vitamin A is known to produce xerophthalmia. The lowered resistance also disposes to infections of the upper respiratory tract.

In *J.A.M.A.*, Feb. 22, 1930, Drs. B. R. Shurly and R. G. Turner, of Detroit, report that organisms isolated from the suppurations of the upper respiratory tract and middle ear, in albino rats suffering from lack of vitamin A, morphologically appearing as gram-negative cocci and classified as such by their fermentative powers, may produce a fatal toxemia when injected intravenously or inoculated into rabbits.

From the experimental observations made, it appears that the poisonous effect is produced by an endotoxin and not by a toxic substance secreted by the organism.

The toxicity of gram-positive organisms, (*Staphylococcus aureus*) compares favorably with the toxicity of known strains of *staphylococcus aureus*. Organisms classified as Friedlander-like, other than indole-producing strains, appear to be avirulent.

Parenteral Injections of Oxygen

In a patient with gas gangrene, following a gunshot wound, for which a limb was amputated, oxygen, to the amount of approximately 150 cc. was given, intravenously, on three occasions and a considerable amount was also injected intramuscularly at the site of infection. After each injection the patient seemed to revive to a considerable extent from the infection and hemorrhage, but he died two days following operation.—Drs. C. H. Potts and W. R. Mathews, of Shreveport, La., in *Tri-State Med.* J., March, 1930.

NEW BOOKS

Graham: Surgical Diagnosis

SURGICAL DIAGNOSIS. By 42 American Authors. Edited by Evarts Ambrose Graham, M.D., Professor of Surgery, Washington University Medical School. In Three Volumes, with Separate Index Volume. Illustrated. Philadelphia and London: W. B. Saunders Company. 1930. Price, \$35.00 a set.

This work will fill an important place in the library of every progressive surgeon.

Volume I deals with wounds, infections, postoperative complications, blood vessels, muscles, tendons, fascia, bone, joints, bursae, the spine, fractures and dislocations; Volume II, with the female genitalia, skin, scalp, subcutaneous tissues, mouth, neck, thyroid, stomach, peritoneum, intestine, spleen, hernia and "acute abdomen;" Volume III, with the lungs, breast, liver and pancreas, rectum, genitourinary system, head, spinal cord, psychoses, peripheral nerves and the sympathetic system.

The work is systematically arranged, exceptionally well indexed, admirably illustrated, and the publishers, apparently, have spared nothing in expenditure to produce a well-printed and well-bound set of books. In this they have succeeded. It is gratifying to note that the type is sufficiently large for pleasant reading, without eye strain. This, in the opinion of the reviewer, is a matter of importance to those who read a great deal.

The various sections dealing with particular phases of pathology and differential diagnosis are exceptionally well handled. To analyze the chapters individually would lead one far afield, the work being an extensive one. Suffice it to say that, in every volume there is sufficient valuable information to render the work, as a whole, extremely worth while.

For the practitioner and the advanced student, these volumes contain a wealth of important information.

M. T.

Crummer: Heart Disease

CLINICAL FEATURES OF HEART DISEASE. An Interpretation of the Mechanics of Diagnosis for Practitioners. By Leroy Crummer, M.D., Emeritus Professor of Medicine, University of Nebraska. Introduction by Emanuel Libman, M.D., Professor of Clinical Medicine, Columbia University. Second Edition, Revised and Enlarged. New York: Paul B. Hoeber, Inc. 1930. Price \$4.00.

We are glad to see a second edition of Dr. Crummer's book on the clinical aspects of heart disease, especially now when the importance and

necessity of thorough clinical examination, rather than too great a reliance upon routine instrumental tests in arriving at a diagnosis, is being stressed. One of the points that Dr. Crummer emphasizes is that, although modern instruments of precision have greatly added to our knowledge of the heart, the added data are of little importance as supplementing what we can observe when formulating a diagnosis or prognosis in a given case. The clinical examination always remains the basis.

The book is based upon a prolonged and accurate study of patients. It contains a mass of valuable facts and suggestions, many of which are original with the author.

The nineteen chapters which make up the volume take the reader through every clinical phase, from the history-taking to treatment, including the management of emergencies.

While it is not intended to be a complete treatise on diseases of the heart, the book forms a reliable guide for the general practitioner in dealing with the commoner heart troubles. It is put forward rather as a personal book, but the author's methods are those which will be recognized as such as appeal to common sense and the handling of the subjects treated is well within the scope of the general practitioner.

Finally, general practitioners should, by what is here shown, be stimulated to greater and more accurate clinical observation.

Mechanically, the volume is excellent.

Macleod: Physiology and Biochemistry

PHYSIOLOGY AND BIOCHEMISTRY IN MODERN MEDICINE. By J. J. R. Macleod, M.D., LL.D., D.Sc., F.R.S., Regius Professor of Physiology in the University of Aberdeen, Scotland; formerly Professor of Physiology in the University of Toronto, Canada, etc. Assisted by Roy G. Pearce, A. C. Redfield, N. B. Taylor, and J. M. D. Olmsted and by others. Sixth Edition. With 295 Illustrations, Including 9 Plates in Colors. St. Louis: The C. V. Mosby Company. 1930. Price \$11.00.

The art of medicine is still to a large extent empiric and based on the study of symptoms rather than upon the underlying derangements of which the symptoms are partly expressive. As is well known, the practice of medicine lags behind the laboratories of research, especially physiologic research.

The responsibility for the failure of the application of many physiologic discoveries in the diagnosis and treatment of disease is due, almost

entirely, to the limited amount of time allotted in medical school curriculums to the study of this subject. Hence the importance of books, of which Dr. Macleod's is a conspicuous example, which are written for the express purpose of supplying the student and practitioner with the fundamentals of, as well as the advances in, physiologic science and which make up for the shortcomings of the medical course.

Apart from the intensely pleasurable interest aroused in the reader of this volume, on acquaintance with the great physiologic and biochemical advances of recent years, there is the practical advantage of applying this knowledge to daily practice. Diagnostic acumen (and appropriate treatment) are oriented toward the causes of disturbed function, rather than to symptoms; the habit of observation and the inductive method are carried from the laboratory into the clinic and to the bedside.

The work is divided into ten parts: The physicochemical basis of physiologic processes; the blood and the lymph; the neuromuscular system; the special senses; circulation of the blood; respiration; digestion; excretion of urine; metabolism; and the endocrine organs or ductless glands. The textual matters and illustrations have been brought thoroughly up to date in the present (sixth) edition.

While the book is very valuable to the practitioner, general or special, it should be most appealing to the younger members of the profession in rounding up their knowledge of scientific medicine and keeping them familiar with the progress in physiologic and biochemical research.

Marriott: Infant Nutrition

INFANT NUTRITION. A Textbook of Infant Feeding for Students and Practitioners of Medicine. By William McKim Marriott, B.S., M.D., Professor of Pediatrics, Washington University School of Medicine; Physician in Chief, St. Louis Children's Hospital, St. Louis. Illustrated. St. Louis: The C. V. Mosby Company. 1930. Price \$5.50.

The subject of infant nutrition is one that has engaged very particular attention and undergone radical changes, especially in the past decade or so. In this book, Dr. Marriott summarizes present-day knowledge concerning the nutritional requirements of infants, under normal and pathologic conditions, and indicates the effects of failure to meet any or all of these requirements.

There are 34 chapters and an appendix. These cover metabolism, food essentials, food formulas, special and proprietary foods, the various pathologic conditions arising from malnutrition, deficiency diseases, etc. All that a general practitioner of medicine, or even a specialist in pediatrics, needs to know about the feeding of infants and concomitant matters will be found in this volume.

Dr. Marriott treats the important subject of artificial feeding well, especially the value of cow's milk modifiers and special milk mixtures. Apathesia and the various diarrheas are also particularly well discussed, as well as the important matter of infantile infections, to which the author considers that many conditions, often

referred to dietary faults, are in reality due.

On looking through the work it is evident that Dr. Marriott has based his opinions in regard to nutrition and the value of foods on the latest laboratory and other experimental investigations; but he points out that there are numerous ways in which infants may be fed successfully without any one method of feeding being recommendable to the exclusion of others. In the case of infants, as with adults, clinical observation and the study of personal idiosyncrasies evidently has much more weight than exact formulation.

This book should be welcomed by general practitioners and all those who have to do with the care and management of infants. It crystallizes the efforts of many investigators in different countries and gives a concise picture of present-day successful nutritional management at the most important period of life.

Hertzler and Chesky: Minor Surgery

MINOR SURGERY. By Arthur E. Hertzler, M.D., Chief Surgeon, Halstead Hospital, and Victor E. Chesky, M.D., Chief Resident Surgeon, Halstead Hospital. Second Edition. With 475 Illustrations. St. Louis: The C. V. Mosby Company. 1930. Price \$10.00.

This is an excellent handbook and guide to the recognition and treatment of minor injuries and surgical lesions, which should be appreciated by clinical assistants and general practitioners. It is really more than a minor surgery, as it clearly describes definitely appropriate treatments for the emergency injuries of various kinds which require surgical handling.

Of the 21 chapters which make up the volume, the first four are devoted to general considerations, including explicit explanations of the common surgical technics and bandaging. The remaining chapters cover emergencies in different regions.

A book such as this is an absolute necessity to every general practitioner, who must at all times be prepared to deal with emergencies as here described, since they make up a large percentage of ordinary general practice. To the hospital interne and surgical dispensary student the book should be a *vade mecum*, which tells him what to do when something must be done at once and when the right way of doing it is of prime importance.

The illustrations are well chosen and practical and the typography and general bookmaking are excellent.

Andrews: Gandhi

MAHATMA GANDHI'S IDEAS. Including Selections from His Writings. By C. F. Andrews. New York: The Macmillan Co. 1930. Price \$3.00.

Whatever one may think of his personal idiosyncrasies and his way of doing things, Mohandas Gandhi is a world figure—the key to the situation in India and, perhaps, the most personally powerful man in the world today. The ideas of such a man cannot be without interest to anyone whose outlook extends beyond his own dooryard.

Charles F. Andrews has lived and worked with Gandhi, both in South Africa and in India, and has been admitted to the circle of his intimates, so that he speaks with the authority of personal knowledge. In each particular line he has, however, backed up his observations with Gandhi's own writings on the subject under consideration.

The papers are full of reference to *ahimsa* (non-violence or harmlessness), *swadeshi* (dependence upon one's self and one's immediate surroundings), *khaddar* (homespun cloth and its spinning), *swaraj* (national independence), etc., and if we would understand what it is all about, we must know what Gandhi thinks of all these things and how he is manipulating them for the amelioration of the condition of his countrymen. We must, moreover, gain some insight into the viewpoint of this orthodox (if somewhat free-thinking) Hindu, for the doctrines of that great religion are bound up with the political activities which are calling forth such an outpouring of printers' ink.

In this volume one will find Gandhi's own statement as to why he is a devout and unshakable Hindu; the relations between Hindus and the Muhammedans (or Muslims); Gandhi's reactions to Jesus and to Christianity; the importance of domestic spinning and weaving; the problems of caste and "untouchability"; the practice of non-cooperation or "soul-force," as a means to a political victory; and various other factors in the present sociologic situation in India.

The quotations from Gandhi's writings show that he, not only thinks, but also writes with remarkable directness, power and clarity. A study of such writing can scarcely fail to stimulate thought and enlarge the reader's outlook.

A saint (for Gandhi is no less) in politics is rare enough; but when that saint also thinks like a savant, writes like a philosopher and possesses the complete disregard of personal comfort and even of life itself, which animated the early Christian martyrs, one does not wonder that all India is rallying to his standard.

This is a book no thoughtful person can well afford to miss.

Koblanck: Nose as a Reflex Organ

DIE NASE ALS REFLEXORGAN DES AUTONOMEN NERVENSYSTEMS. Hinterlassene Schriften von Dr. Alfred Koblanck, weil. a. o. Professor an der Universität Berlin, dirig. Arzt am Rudolf-Virchow-Krankenhaus in Berlin. Mit einem Vorwort von Prof. Dr. Friedrich Matthesi, Priv.-Doz. an der Universität Hamburg, Oberarzt der gynakol. Abt. des Allgem. Krankenhauses St. Georg, Hamburg. Mit 11 Abbildungen. Berlin & Wien: Urban & Schwarzenberg. 1930. Price Geh. RM 15—Geb. RM 17.50—.

The nose has been regarded and studied almost altogether from the point of view of its function as an organ of smell. But apart from this direct sensory aspect there are other nervous reflex phenomena associated with the nose which are interesting physiologically, physically and perhaps therapeutically.

Dr. Koblanck's monograph deals principally with the reciprocity of reflex actions between

the nose and the genitalia. There is a fair amount of out-of-the-way literature on this subject and a paper summarizing some of it, by Dr. H. C. Riordan, of Chicago, was published in *CLINICAL MEDICINE AND SURGERY*, 1928, p. 809.

Reflex associations between the nasal mucosa, stomach, heart, and different muscles, as well as those associated with asthma and hay-fever, are touched upon by the author and we are glad to see that he has devoted a fair amount of space to the possible association of the nasal nerve endings with reflex epileptic seizure, a matter to which it might be desirable to devote some further investigation.

This monograph is one which we think might with advantage be translated into English.

Thoms: Analgesics, Anesthetics and Narcotics

BETÄUBUNGSMITTEL UND RAUSCHGIFTE. Ihre Gewinnung, Eigenschaften und ihre Gefahren. In Allgemeinverständlicher Form dargestellt von Prof. Dr. phil. et Dr. med. h. c. Hermann Thomas, Geh. Reg.-Rat, Berlin. Berlin und Wien: Urban & Schwarzenberg. 1929. Price RM 7.20.

The author of this small volume is well qualified to discuss these medicinally important classes of substances from the botanical, chemical, physiologic, hygienic and industrial standpoints. His discussion of desensitizing agents includes sedatives and hypnotics; anodynes and analgesics, of both natural and synthetic origin, such as alcohol, tea, coffee, tobacco, ether, chloroform, cocaine, procaine, stovaine, alypin, opium and its alkaloids, etc. The habit-forming drugs are considered from physiologic and legal standpoints and a discussion is given of the methods of combatting addiction.

The book is a very useful compilation for physicians and pharmacists who wish information regarding the substances employed in these fields and the properties thereof. It is written particularly from the European standpoint and unfortunately contains no information regarding the number of important medicinal agents employed in this country, such as the hypnotics, Neonal, Amytal and Ipral; the local anesthetics, Butyn, Apothesine and Butesin; and the general anesthetic, ethylene.

E. H. V.

Medical Education in Europe

MEDICAL EDUCATION AND RELATED PROBLEMS IN EUROPE. Commission on Medical Education. 1930.

This book is the result of a visit to some of the representative centers of medical teaching in Europe. Its aim is to present the general characteristics of the training at these centers, with the details of instruction in individual schools.

The information collected will be of value if the scheme of medical education in the United States is to be reconsidered.

The book also contains a large amount of valuable information regarding sickness insurance in the European countries in which it has been

established, as well as the views of the medical profession in regard to its working and its effects upon individual medical practitioners.

Robinson: Hasheesh

AN ESSAY ON HASHEESH. By Victor Robinson, M.D., New York: Dingwall-Rock, Ltd. 1930. Price \$1.50.

Twenty years ago, Dr. Robinson wrote an essay on hasheesh, which was delivered a number of times as a lecture and was finally privately printed. The first edition has long been exhausted and now the essay has been reprinted, just as it originally appeared.

Here one finds the history, botany, pharmacology and therapeutics of Indian hemp, set forth in fine literary phraseology; but that is merely an introduction to the accounts of the experiences of several persons (including the good Doctor himself) who took the drug.

Robinson's easy and ornate style is familiar to most physicians, and this is one of the best examples. The reading of this charmingly written and erudite essay will furnish a delightful and profitable hour. One only fears that the ravishing visions so vividly described may tempt others to an unwarrantable indulgence.

International Medical Annual

THE INTERNATIONAL MEDICAL ANNUAL. A Year Book of Treatment and Practitioner's Index. Editors: Carey F. Coombs, M.D., F.R.C.P. and A. Rendle Short, M.D., F.R.C.S. Forty-eighth year. New York: William Wood and Company. 1930. Price \$6.00.

This is a most excellent résumé of the year's literature in medicine and surgery. The editors are almost all British specialists of note and the presentation is such that, not merely an abstract, but a judicious criticism is offered.

The subjects are arranged alphabetically and there is an ample index. The volume really gives a crystallized synopsis of the year's literary output, especially the American, British, and French literature. Space demands that the type be small but it is clear and legible and the illustrations good and well chosen.

An excellent work for busy physicians.

Ballenger: Nose, Throat and Ear

DISEASES OF THE NOSE, THROAT AND EAR. Medical and Surgical. By William Lincoln Ballenger, M.D., F.A.C.S. Late Professor of Otolaryngology and Rhinology, College of Medicine, University of Illinois, Chicago; Fellow of the Laryngological Association; etc. Revised by Howard Charles Ballenger, M.D., F.A.C.S. Associate of the Otho S. A. Sprague Memorial Institute Laboratory of the Children's Memorial Hospital, Chicago; Attending Otolaryngologist to the Evanston Hospital; etc. Sixth Edition. Thoroughly Revised. Illustrated with 583 Engravings and 29 Plates. Philadelphia: Lea & Febiger. 1930. Price \$11.00.

The 5th edition of this well known textbook was reviewed in *CLIN. MED. & SURG.*, Oct., 1927, p. 800.

In the present edition many of the chapters have either been entirely rewritten or extensively revised.

In the portion of the book devoted to the throat, Dr. G. Tucker adds a new section on the larynx, and Chevalier Jackson writes chapters on bronchoscopy, esophagoscopy and gastroscopy.

In the ear section, Dr. A. Lewy has rewritten the chapters on physiology and functional tests of the labyrinth and on the inflammatory diseases of the labyrinth. These and other chapters dealing with functional tests will be of importance in connection with examinations of air pilots.

Altogether, the volume shows evidence of a very careful scrutiny to bring it entirely up to date and hold its place as one of the leading texts on diseases of the ear, nose and throat, particularly for the specialist.

Weinmann: Dead Bodies

A SURVEY OF THE LAW CONCERNING DEAD HUMAN BODIES. Issued Under the Auspices of the Committee on Medicolegal Problems. By George H. Weinmann, LL.B. Attorney and Counselor at Law. Bulletin of the National Research Council. December, 1929. Number 73. Price \$2.00.

This bulletin contains a great deal of legal information regarding dead human bodies, which is of interest to private medical practitioners, public health officials and officers of hospitals and other public institutions.

The custody and disposal of bodies, autopsies, transportation, interment and exhumation are covered and the differences in the various state laws are pointed out.

It is rather curious to note that, in some states, it is mandatory that a surgeon must dispose of any part removed at operation in accordance with the wishes of the patient. Such part, insignificant or otherwise, may have to be "buried."

Fairbairn: Text Book for Midwives

A TEXT BOOK FOR MIDWIVES. By John S. Fairbairn, M.A., B.M., B.Ch. (Oxon), F.R.C.P. (Lond.), F.R.C.S. (Eng.), Mast. Midw. Soc. Apoth. (Lond.), Consulting Obstetric Physician, St. Thomas's Hospital and General Lying-In Hospital, York Road, S.E.; etc. Fifth Edition. With 3 Plates and 119 Illustrations, 5 in Colour. London and New York: Humphrey Milford, Oxford University Press. 1930. Price \$8.00.

This is a very comprehensive book which is so arranged that it may serve, not only as a course for student midwives, but also to give advanced information for those who are established in practice.

The work includes sections on anatomy and physiology, pregnancy, labor, the puerperium and hygiene.

While the purely descriptive matter may be used for the instruction of obstetric nurses anywhere, it has been arranged so as to meet the requirements of the British examining boards and to acquaint the midwife with the regulations of British laws governing the practice of mid-

wifery. The author is an experienced teacher and the book seems to be very complete as a text for British midwives of high grade. Some regulations of British practice might well be emulated here.

Craig: Laboratory Methods of United States Army

LABORATORY METHODS OF THE UNITED STATES ARMY. Edited by Charles F. Craig, M.A., M.D., Colonel, Medical Corps, United States Army. Approved by the Surgeon-General of the Army. Illustrated. Third Edition, Revised, of Medical War Manual No. 6. "Manual of Laboratory Methods." Philadelphia: Lea & Febiger. 1929. Price \$3.50.

The third edition of the Manual of Laboratory Methods of the United States Army (Medical War Manual No. 6) has been thoroughly revised and largely rewritten to bring it into line with recent developments in knowledge. The result is that the present book is almost twice the size of its predecessor.

This manual may be used as a complete laboratory guide for college courses in bacteriology, as a work of reference for all bacteriologists, clinical pathologists, hygienists and sanitarians, as well as by any practitioner who does systematic laboratory work. It is compact, direct and specific.

Scott: Morphine Habit

THE MORPHINE HABIT; AND ITS PAINLESS TREATMENT. By G. Laughton Scott, M.R.C.S., B.A. (Oxon), Lately Senior Physician, London Neurological Clinic. London: H. K. Lewis & Co. Ltd. 1930. Price 5 shillings net.

In this monograph the author endeavors to show that the psychic and somatic rehabilitation of the morphine addict, who voluntarily presents himself for treatment, is a simpler and more hopeful task than it is generally believed to be.

The etiology and symptomatology of morphinism are described and the various treatments, especially the Jennings and Lambert treatments, in use in England are given in detail with a number of illustrative cases. The avoidance of "withdrawal shock" is a feature.

The "Experiences of a Medical Morphinist" are given in an appendix.

Mackenzie: Action of Muscles

THE ACTION OF MUSCLES; INCLUDING MUSCLE REST AND MUSCLE RE-EDUCATION. By Sir Colin Mackenzie, M.D., F.R.C.S., F.R.S. (Edin.) Professor of Comparative Anatomy and Director of the Australian Institute of Anatomy, Canberra; etc. Second Edition. With 100 Illustrations. New York: Paul B. Hoeber, Inc. 1930. Price \$3.50.

This book had its inception in post-war study of orthopedic injuries and the rehabilitation of the maimed.

The re-education of muscles, following traumas involving them, calls for a thorough knowledge of the synergistic, reciprocal and

antagonistic actions of these engines, and these physiologic phenomena, which are only lightly touched upon in most textbooks, form the subject of the author's investigations as set forth here.

The book will be found valuable, not alone to those surgeons and others who have to deal with direct muscular traumas, but also with the prevention and correction of muscular deformities following infantile and other types of paralysis.

Methods and Problems of Medical Education

METHODS AND PROBLEMS OF MEDICAL EDUCATION. Sixteenth Series. New York: The Rockefeller Foundation, 61 Broadway. 1930. Gratis on Request.

These publications of the Rockefeller Foundation, show the arrangement of buildings and structural layouts for the teaching of the science and art of Medicine in the most important teaching centers of the world. They should be of the utmost value to those planning to build or remodel similar institutions, as they give detailed plans, as well as photographs and descriptions by members of the responsible staffs of the institutions described.

The present monograph deals with the constructional and equipment details of the buildings devoted to the teaching of anatomy, histology and embryology. It includes some of the principal medical schools in Germany, England, France, Japan, Holland, South America and the United States.

These publications are easily available for all those who have any good reason for obtaining them.

Medical Clinics for North America

THE MEDICAL CLINICS OF NORTH AMERICA. Mayo Clinic Number. Volume 13, Number 6, May 1930, Index Number. Philadelphia and London: W. B. Saunders Company. Price per Clinic Year, July 1929 to May 1930, paper \$12.00, cloth \$16.00.

The May 1930 number of the Medical Clinics of North America, devoted to contributions from the Mayo Clinic at Rochester, Minn., is one of the best issues we have seen. Dr. Wm. A. Plummer gives good reasons for urging thyroidectomy in certain cases of adenomatous goiter. Two good papers are devoted to jaundice: Drs. A. M. Snell, F. R. Vanzant and E. Starr Judd write an excellent presentation of "The Complications and Sequela of Prolonged Obstructive Jaundice" and Drs. J. F. Weir and F. M. Jordan contribute a paper on "Clinical Considerations of Some Types of Intrahepatic Jaundice." Both these papers on jaundice are based on the observations of clinical cases and the general practitioner will derive much benefit by following the clinical course and noting the deductions.

A good paper on "Chronic Ulcerative Colitis and its Roentgenologic Manifestations" is given by Dr. H. M. Weber and it is rounded out by Dr. P. W. Brown's paper on "Inflammatory Lesions of the Rectum and Colon" which, as he shows, may often be due to the *Endamoeba histolytica*.

Drs. D. G. Christ and P. S. Hench write on the "Course and Prognosis in Chronic Infectious Arthritis," and give some excellent rules for avoiding exacerbations. Another paper on arthritis is that furnished by Drs. A. C. Nickel and L. G. Stuhler on the "Prostate Gland as a Focus of Infection in Arthritis," which suggests that practitioners might more frequently think of this possible focus.

We have mentioned only a few of the contributions to this issue because they are matters which are likely to be met with by the general practitioner; but all of the 24 papers included in the number are excellent clinical presentations, although some of them deal with matters which are only rarely observed, even in a large clinic.

Reed and Gregory: Obstetrics for Nurses

OBSTETRICS FOR NURSES. By Charles B. Reed, M.D., F.A.C.S., Professor of Obstetrics, Northwestern University Medical School; Chief Obstetrician Wesley Memorial Hospital, Chicago, and Charlotte L. Gregory, R.N., B.S., M.D., Adjunct in Obstetrics at Wesley Memorial Hospital; Clinical Assistant in Obstetrics at Northwestern University Medical School, Chicago. One Hundred Forty-Four Illustrations, Including Two Color Plates. Third Edition. St. Louis: The C. V. Mosby Company. 1930. Price \$3.00.

It may be assumed as granted that there is no branch in nursing in which practical training is so important as in obstetrics. The obstetric nurse is more than a midwife; she is the associate of the obstetrician.

The present text book represents the standard practice at the Northwestern University Medical School and Wesley Hospital, Chicago. While admittedly promulgating the personal ideas and technics of the senior author, obstetric teaching in the leading American teaching institutions has become so standardized that this book may be considered as more or less typical of it.

Throughout the work stress is laid on the necessity for continual watching of the parturient woman, by the nurse, so as to prevent the possible complications of pregnancy and labor.

There are 25 chapters, 7 of which are devoted to the care of the infant. There are also a therapeutic index and a good glossary.

The volume serves, not only as a suitable class book for student nurses, but its scope also includes the post-graduate instruction of the obstetric nurse. The present (third) edition has been fully revised and brought up to date.

Brugsch: Internal Medicine

LEHRBUCH DER INNEREN MEDIZIN IN ZWEI BANDEN. Von Professor Dr. Theodore Brugsch, o. ö. Professor der Medizin an der vereinigten Friedrichs-Universität Halle-Wittenberg und Direktor der med. Universitätsklinik Halle (Saale). Erster Band. Mit 151 Abbildungen im Text und 18, davon 16 farbigen Tafeln. Berlin und Wien: Urban & Schwarzenberg. 1930. Price geh. RM 27.— geb. RM 30.

This is the first of two volumes which will constitute Professor Brugsch's new textbook of internal medicine. It covers methods of general therapy as well as the description and therapeutics of diseases of the endocrine glands and metabolic apparatus, vascular system, and the infections.

The book is written with all the thoroughness and minutiæ of detail that characterize the work of German medical authors. We are struck particularly with the handling of the endocrine glandular diseases and disorders of metabolism. While necessarily the limits of the book preclude such a full discussion of these (as well as of the other diseases treated) as will be found in special monographs, yet the general practitioner who reads German will find here all the essential facts set forward in an orderly and scientific fashion.

As an example of the rapidity with which medical knowledge advances it may be remarked that this work, issued this year, treats Malta fever and Bang's disease as separate entities although, at least in the United States, it is now fairly well accepted that the *Micrococcus melitensis* of Bruce and Bang's brucella are identical.

There are no bibliographic references nor are such necessary in a working manual of this kind.

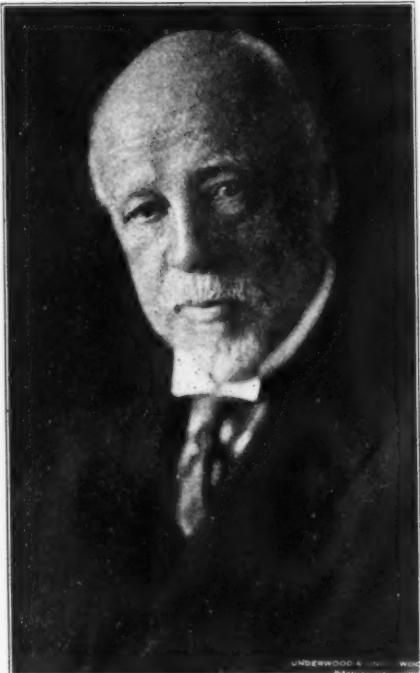
This is a handbook of medical practice which may be confidently recommended to the physician who reads German.

Pirquet: Age Factors in Malignant Disease

ALLERGIE DES LEBENSALTER. Die börsartigen Geschwülste. Von Dr. Clemens Pirquet, O. O. Professor an der Universität Wien. Mit 142 Abbildungen und 1 Tafel. Leipzig, Germany: Georg Thieme, Antonstrasse 15/19. 1930. Price, M. 23; geb. M. 25.

In this monograph (published posthumously) Professor Pirquet, from the study of mortality statistics, has constructed curves showing the occurrence of malignant tumors of various kinds at different ages in both sexes. The study is made from an allergic basis.

MEDICAL NEWS



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Dr. William H. Welch

On April 8, 1930, the eightieth birthday of the "Dean of American Medicine," Dr. William Henry Welch, of Baltimore, was the occasion of an international celebration, participated in by the outstanding medical men of the world. The radio was used to coordinate the various gatherings and to broadcast the numerous speeches of congratulation and appreciation.

Dr. Welch was born in Norwich, Conn., and came of a long line of physicians. He was graduated from Yale College in 1870, and later from the College of Physicians, New York, and began teaching pathology at Bellevue Hospital Medical College in 1877, where he inaugurated a new era in

the handling of that subject and in medical education in general.

In 1884 he became professor of pathology in Johns Hopkins University and when the Medical School was opened, in 1893, he was made its dean. In 1917 he gave up his other work to take charge of the new School of Hygiene and Public Health; and in 1926 assumed the chair of the history of medicine—both pioneering ventures.

During the war he rose to the rank of Colonel, and afterward was made a Brigadier-General in the Reserve Corps.

Dr. Welch is president of the board of directors of the Rockefeller Institute for Medical Research and chairman of the advisory council of the Milbank Memorial Fund of New York. He holds honorary titles from a dozen universities and has received Orders from several foreign countries. His contributions to medical literature number about 350 titles.

Years, obviously, do not make a man old.

Dr. Fordyce Joins A.M.A. Staff

Dr. Claude Fordyce, a practitioner, of Falls City, Nebraska, has joined the editorial staff of the American Medical Association. He will probably edit *Hygiea*.

Dr. Fordyce has had a large literary experience, being the author of several books on outdoor life and president of the Nebraska Writer's Guild.

Watch for important announcement next month!

Congress of Physical Therapy

The ninth annual scientific session of the American Congress of Physical Therapy will be held at the New Hotel Jefferson, St. Louis, Sept. 8 to 12, inclusive, 1930, and will be an intensive postgraduate course in this highly important subject. Instruction will range from fundamental principles to highly specialized details of technic, so

that anyone, from the novice to the expert, will find interesting and profitable material, presented by capable men.

The preliminary program, which will contain full details, may be had from the executive secretary of the Congress, Suite 716, 30 N. Michigan Ave., Chicago.

A Physicians' Bank

According to *Le Siècle Méd.* (Paris), May 1, 1930, Polish physicians have nominated a commission to arrange for the creation of a physician's bank in that country.

This bank will make pecuniary loans to physicians, in order to found and maintain clinics, hospitals, etc., and to establish themselves in practice.

The prize offers on page 6 of the January CLIN. MED. AND SURG. are worth studying.

Summer Clinics

Again this year, the Chicago Medical Society is offering well-planned summer clinics, at the Cook County Hospital, to a rather limited number of interested and sincere physicians. These clinics have, in past years, been eagerly sought and highly appreciated; will run, this year, from Aug. 11 to 22, inclusive; and the registration fee is only \$10.

Write for full particulars and registration blank to the Chicago Medical Society, 185 N. Wabash Ave., Chicago.

Medical Library and Equipment

Owing to the recent death of Dr. P. F. Roberts, of Kewanee, Ill., his professional library and equipment are for sale.

Anyone who is interested can obtain full information from Mrs. Roberts, 208 Roosevelt Ave., Kewanee.

International Congress of Physical Therapy

The international Congress of Physical Therapy will meet in Liege, Belgium, Sept. 15 to 19, inclusive, 1930.

Two tours have been arranged which will give American physicians a chance to attend the Congress and, at the same time, obtain a birdseye view of Europe, all at moderate expense. The first tour sails from New York on Aug. 15 and the second on Aug. 22.

Full particulars may be had from Dr. William B. Snow, 1650 Broadway, New York City.

United States Civil Service

The United States Civil Service Commission states that physicians are needed at the following-named establishments of the United States Indian Service:

Cheyenne River Agency, South Dakota.
Jicarilla Agency, New Mexico.

Theodore Roosevelt Indian School, Arizona.

Consolidated Ute Agency, Colorado.
Standing Rock School, North Dakota.

The Veterans' Bureau Hospital at Fort Lyon, Colo., is in need of a medical officer to serve as specialist in pathology.

Persons interested in any of these positions should write to the United States Civil Service Commission, Washington, D. C., and ask for examination announcement No. 51 and application blank Forms 2600 and 2398.

Graduate Medical Schools

Those who are interested in doing some postgraduate study this summer will do well to write to the American Medical Association, 535 N. Dearborn St., Chicago, for their pamphlet listing schools for such study, both at home and abroad.

Clinical Conference

The annual Fall Clinical Conference will be held in Kansas City, Mo., Oct. 6 to 10, inclusive, 1930. These conferences are growing in importance and offer excellent facilities for postgraduate study.

For full particulars, write to the Secretary, Kansas City Southwest Clinical Society, 620 Rialto Bldg., Kansas City, Mo.

Send For This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physician's supplies, foods, etc., CLINICAL MEDICINE and SURGERY, North Chicago, Ill., will gladly forward request for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is

to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

When requesting literature, please specify whether you are a doctor of medicine, dentistry, medical student, a registered pharmacist, or a nurse.

E- 2 Your Prestige and Profit. 8-page booklet. The Carroll Dunham Smith Pharmacal Co.	E-244 I Am Oxiphen! Pitman-Moore Co.
E- 3 Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katherine L. Strom.	E-256 The Modern Way of Giving Digitalis. Upsher Smith Co.
E- 5 Ethical Medicinal Specialties. 8-page booklet. A. H. Robins Co.	E-258 Prophylaxis. August E. Drucker Co.
E- 17 An Index of Treatment. Burnham Soluble Iodine Co.	E-268 Eat Uncle Sam Health Food. Uncle Sam Breakfast Food Co.
E- 45 Vera-Perles of Sandelwood Comp. Paul Plessner Co.	E-269 Special Course No. VI Traumatic Surgery. Illinois Post Graduate Medical School, Inc.
E- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company.	E-271 The Intestinal Flora. The Battle Creek Food Company.
E- 49 The Calcreose Detail Man. Maltbie Chemical Co.	E-286 Ultra Violet Therapy in Your Office. A. S. Aloe Co.
E- 95 Everything for the Sick. Lindsay Laboratories.	E-292 Acidosis and Infection—Alka Zane. William R. Warner & Co., Inc.
E-103 The Electron, July-August, 1930. McIntosh Electrical Corporation.	E-301 Merrell's Salicylates. The Wm. S. Merrell Company.
E-116 Hemo Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc.	E-310 Conclusions from published research of the value of Ceanothyn as a hemostatic. Flint, Eaton & Co.
E-120 Building Resistance — Guiatonic. William R. Warner & Co., Ltd.	E-318 Blood Clinical and Laboratory Diagnosis. A book of 160 pages by Henry Irving Berger, M.D., Battle & Company.
E-156 Siomine (Methenamine Tetraiodide). Pitman-Moore Company.	E-335 The Bloodless Phlebotomist. The Denver Chemical Manufacturing Company.
E-196 "Facts Worth Knowing." Intravenous Products Co. of America, Inc.	E-336 The Secret of Our Digestive Glands. J. W. Wuppermann Angostura Bitters Agency, Inc.

E-347 A Graphic Chart of the Treatment of Circulatory Disturbances. Merck & Company.

E-354 Getting the Most Out of Life. Stanco, Inc.

E-369 Burdick Zoalite Series for Infra Red Therapy. The Burdick Corporation.

E-374 Table for Determining Date of Delivery. The Viburno Company, Inc.

E-377 All that Joyous Aroma but less Nicotine. Health Cigar Co.

E-379 Endocrine and other Organotherapy preparations. Armour and Company.

E-382 Three Aces in All Council Accepted. Bilhuber-Knoll Corp.

E-388 Syrup Histosan Controls the Cough In Acute and Chronic Bronchitis, Pneumonia and other Pulmonary Diseases. Ernst Bischoff Co., Inc.

E-391 Imhotep. Egyptian Medicine Was a Quaint Mixture of Rationalism and Magic — Agarol. William R. Warner & Co., Inc.

E-392 Arthritis, Its Classification and Treatment. Battle & Co.

E-396 Rational Relief of Postpartum pains through Gynodyne Therapy. Schering & Glatz, Inc.

E-399 Nitium, Crayon, Ovule, a Medication Radioactive. High Chemical Co.

E-401 When the Cross Roads are Reached in Hemorroids (Piles). Schering & Glatz, Inc.

E-402 The First Question—Agarol. Wm. R. Warner & Co., Inc.

E-404 Urotropin, the Intravenous Administration of the Original Formaldehyde-Liberating Urinary and Systemic Antiseptic. Schering & Glatz.

E-405 30 "Tilden" Cough Syrups from the Oldest Manufacturing Pharmaceutical House in America. The Tilden Company.

E-406 Produces Consistent Results in Asthenia, Low blood-pressure, Slow Convalescence, Run-down conditions. The Harrower Laboratory, Inc.

E-408 When colds hang on and coughs are stubborn remember the effectiveness of Thiocol. Hoffmann-La Roche, Inc.

E-410 Acidosis. A Warning Sign In Pregnancy.—Alka-Zane. Wm. R. Warner & Co., Inc.

E-412 The New Colloidal Antacid. The Wander Co.

E-414 Laboratory Tests in Pictures—Silvogen. Ernst Bischoff Company, Inc.

E-415 Allonal, "Roche," Its Indications in Various Fields of Medicine and Surgery. Hoffmann-La Roche, Inc.

E-416 Obesity, Its Types and Treatment. Battle & Co.

E-418 Diphtheria Can Be Kept From Your Family by Protective Immunization. The National Drug Co.

E-419 Pneumonia, Special Reference to Treatment with Anti-Pneumococcal Serum. The National Drug Co.

E-420 That Delicious Flavor. Angostura Dry the New Ginger Ale. J. W. Wuppermann Angostura Bitters Agency, Inc.

E-421 Colonic Therapy by O. Boto Schellberg. Schellberg Mfg. Corporation.

E-422 The Rationale of Cecal Medication by O. Boto Schellberg. Schellberg Mfg. Corporation.

E-423 Four Active Products, Thyro-Ovarian Co., Pan-Secretin Co., Lydin, and Anabolin. The Harrower Laboratory, Inc.

E-424 When Chemists Turned from Gold to Drugs, Pantopon, Roche. Hoffmann-LaRoche, Inc.

E-425 Cerebrospinal Fever (Epidemic, Cerebrospinal Meningitis, Meningococcal Meningitis, Spotted Fever), Symptoms and Specific Treatment with Anti-Meningococcal Serum. The National Drug Company.

E-426 Our Complete Line of Physiotherapy and Health Equipment. Health Equipment Company.

E-427 Light Therapy. Britesun, Inc.

E-428 Light Therapy. The Burdick Corp.

E-429 Eupinol, a distillate produced at a special temperature from the resinous wood of *Pinus Palustris*. The Tilden Company.

E-430 Three Timely Papers. McIntosh Electrical Corporation.

E-431 Digitan, a Summary of the Principles Governing the Use of Digitalis. Merck & Co., Inc.

E-432 The Disease of Inebriety and Its Cure. The Keeley Institute.

E-433 Nerve and Muscle Regeneration. McIntosh Electrical Corporation.